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page 24

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No. 1082. (No. 38. Vol. XXI.)

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SEPTEMBER 20, 1929.

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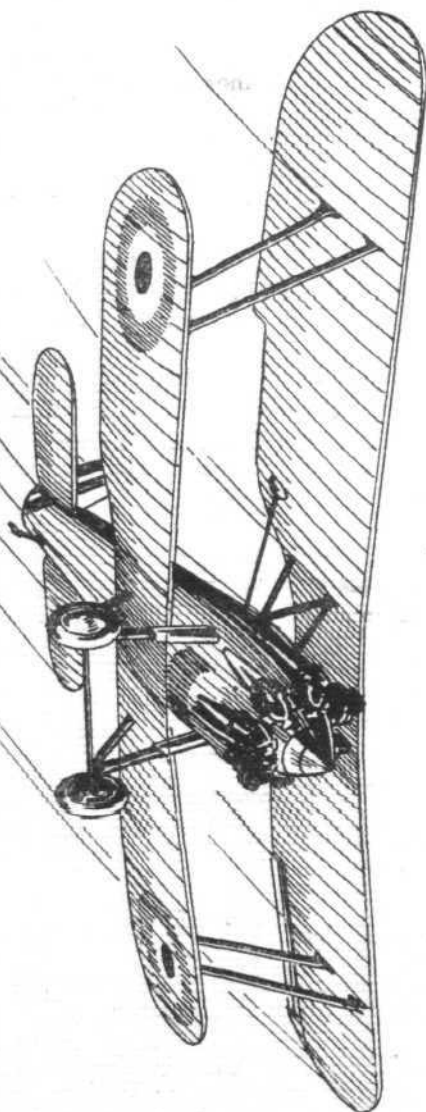
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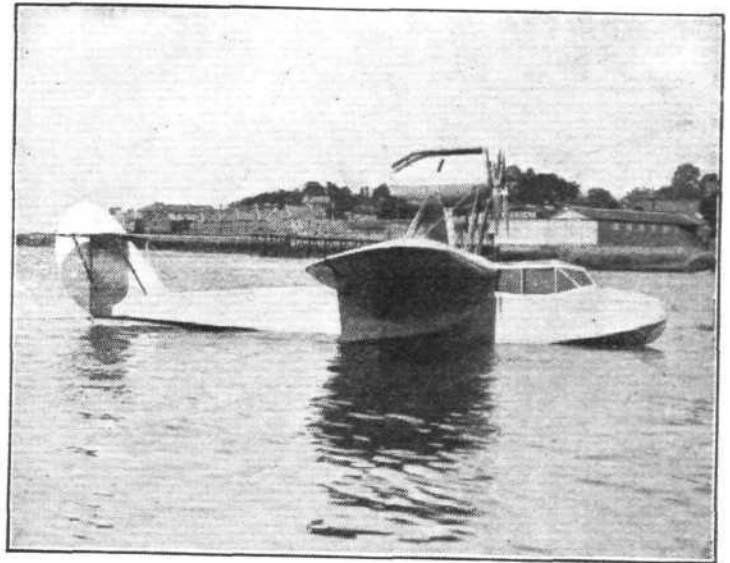
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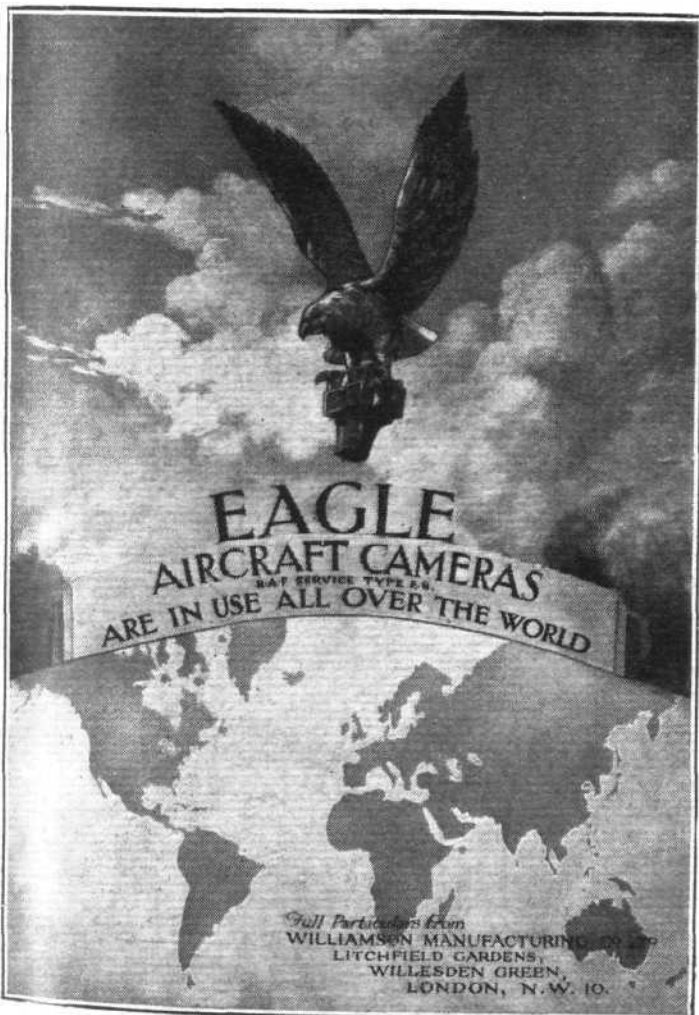
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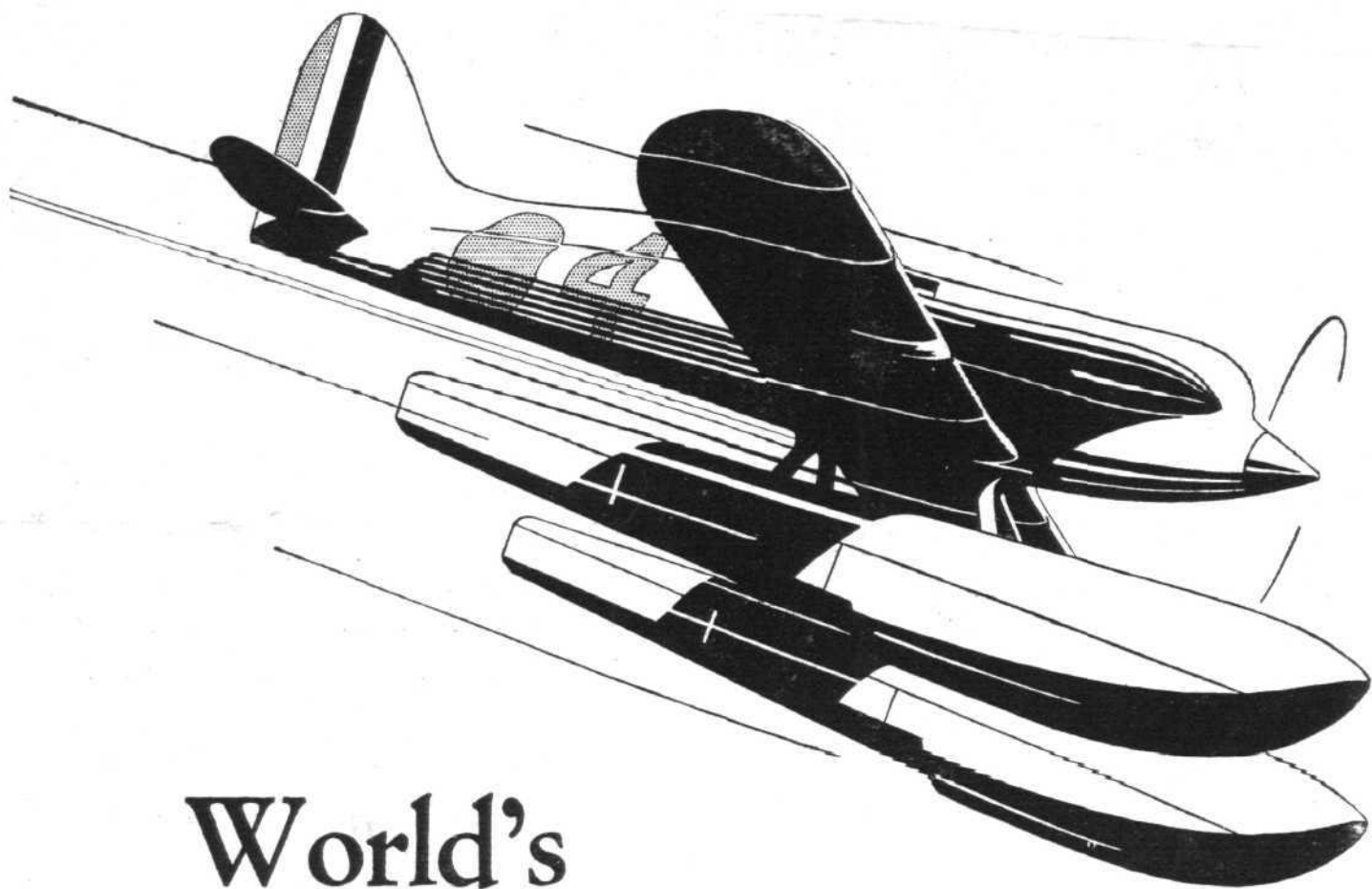
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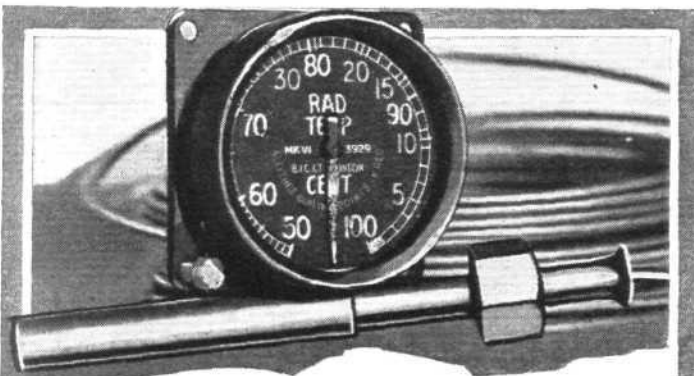
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100 km.	331.7	Flying Officer ATCHERLEY	do.
50 km.	332.49	Flying Officer ATCHERLEY	do.
3 km.	355.8	Squadron-Leader ORLEBAR	do.
	336.3	Flight-Lieut. STAINFORTH	GLOSTER NAPIER VI

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DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1929.

- Sept. 21 Air Rally at Haldon, Teignmouth.
- Sept. 22 Bristol Aeroplane Club's "Farewell" Garden Party, Filton.
- Sept. 28 Northampton Aero Club Meeting, Sywell.
- Oct. 1 Gordon-Bennett Balloon Race, St. Louis, U.S.A.
- Oct. 5 Newcastle Air Pageant, Cramlington Aerodrome.
- Oct. 10 Air Pageant and Light 'Plane Race, Hull Municipal Aerodrome.
- Oct. 31 Guggenheim Safe-Aircraft Competition Closes.

EDITORIAL COMMENT



WITH the Schneider Trophy Contest of 1929 receding into the past, although still fresh in mind, and with the establishing, within a week, of no less than three world's speed records by British aircraft, British aviation has very good cause to be satisfied. If one looks back a few years, Great Britain was, in spite of the generally high standard of her service and commercial types of aircraft, fallen into a position which could only be described as lamentable. We refer to the time, only a few years ago, when not a single world's record stood to the credit of a British pilot on a British machine fitted with a British aero engine. Now Great Britain is in the proud position of leadership in several directions, notably in the matter of speed.

Progress

This position is a direct result of the presentation many years ago by the late M. Jacques Schneider of a trophy for international competition by seaplanes. The trophy was offered at a time when flying generally was very much in its infancy and seaplane flying in particular was a fairly uncertain undertaking. When M. Schneider first offered his trophy he could not possibly have foreseen the importance in international flying which his gift would some day assume. The trophy, although a handsome *objet d'art* enough, is not of any very great monetary value in itself, and the money prize which originally accompanied the trophy was not in the first instance of a magnitude sufficient to attract the world's champions among pilots, designers and constructors. Moreover, the money prize has long since lapsed, the trophy alone remaining. During the first few contests the development was such as might have been expected and foreseen by the donor of the trophy; that is to say, progress was on a scale and at a rate corresponding to the individual efforts of private firms. With the year 1923 there came a pronounced change in the character of the Schneider Contest. In that year, for the first time, the fight for the "blue riband of the air" ceased to be one of private concerns and became

a contest of nations. In that year the United States entered machines and engines produced to Government order and built at Government expense, transported to Cowes by the American Navy and looked after while there by Naval personnel. Needless to say, America won the contest that year. No private civilian concern could hope to compete successfully against the national resources of the United States. America having, so to speak, issued a national challenge, it became necessary for the other nations to take it up also on a national basis, and the result has been a complete change in the character of the Schneider Trophy Contest, or at least in its magnitude or dimensions.

How much it has cost Great Britain in hard cash to win the 1927 and 1929 Schneider Contests we have no means of knowing. That extremely large sums are involved is not to be doubted. The question that will naturally be asked, and the answer to which must in the end decide whether or not there are to be in the future any more Schneider Contests, is whether the Schneider Contest "is worth it." This is a question very difficult to answer fully and decisively. The United States, instrumental in the first instance in endowing the contest with the character which it has now assumed, did not this year consider the Schneider "worth it" in that no national challenge was issued and no machine produced out of national resources. The private venture of Al Williams was a very sporting one, but it was scarcely surprising that he failed. Italy is, as far as can be gathered, very doubtful at the moment. Her experience this year was naturally a very bitter disappointment, although we do not for one moment believe that Signor Balbo will withdraw entirely from the friendly rivalry of producing speed machines. Italy may, quite possibly, retire from the Schneider Contests in the future, but that she will make use of the lessons learned by doing her utmost to capture from us the world's speed record over the straight-line course is not to be doubted for one moment. France had intended to challenge us in this year's Schneider Contest, but failed to get her machines and engines developed in time. That she also may make a serious attempt to beat Orlebar's record is more than likely. By her intention to challenge us in the Schneider, France showed that she considered the contest "worth it."

What we are most concerned in here is whether or not the Schneider Contest is "worth it" from a British point of view. It may be argued that the same amount of money spent upon a more "natural" development would result in greater progress. Personally we doubt it. Let it be assumed, for

instance, that there is no Schneider Contest in the future, but that the money hitherto spent upon developing Schneider machines is devoted to full-scale research upon aerodynamic and structural efficiency and upon the development of more efficient, *i.e.*, lighter, more powerful, and more reliable engines. Is it reasonable to assume that the work carried out will be as intensive, as enthusiastic, and completed in as short a time? Frankly, we do not believe it. If the machine and the engine has to be ready by a certain time, and the penalty for it not being ready by that time is that the work will be very largely wasted and in vain, there is very much greater likelihood of them being ready in time than if next month, or the month after, would do just as well. The importance of the spur which a fixed definite date of such a contest provides cannot easily be overrated.

We have heard it suggested that the Schneider navigability and watertightness tests should be abandoned, and that the necessary take-off for the contest itself should be made to suffice. With that view we do not agree at all. While we would certainly not claim that the navigability and watertightness tests at present in force are of a very serious character, they do in point of fact keep down the pure "freak" which we should otherwise see. No one would claim that the Schneider machines compare in seaworthiness with a large flying-boat, for example, but for out-and-out racing craft we do think that they showed this year quite a remarkable degree of seaworthiness. There was quite a lull in the area where this year's tests were held, and a machine designed merely to get off perfectly smooth water once, fly a short course, and then alight would have stood small chance in the tests. So long as we retain these tests, we may keep the top speed a little below the maximum that *could* be attained, but we shall at any rate produce machines from which we can learn something that may be applied to utility types.

Perhaps, however, the greatest argument in favour of retaining the Schneider, or something like it, is the fillip which is given to engine development. Will anyone seriously argue that, if it had merely been a question of steady "normal" development, the Rolls-Royce firm would have produced the wonderful engine, the most powerful aero engine in the world, in less than a year? We think not. Nor do we believe that any will doubt that the experience gained by the Rolls-Royce engineers in the production and running of the "R" engine will be applied with very fruitful results to service types. We might have got the "R" engine without the Schneider Contest, but we would have got it many years hence, and not in 1929.

Lodge Plugs in the Supermarine S.6

In our Editorial Comment in last week's issue of FLIGHT we made the statement that when Waghorn's engine was examined after the navigability and mooring tests preceding the Schneider Trophy Contest it was found that a plug had broken up and that a cylinder was scored, necessitating the renewal of a cylinder block in record time. Our attention has been called to this statement, which, we now learn, does not tally with the facts, and upon looking into the matter we find that our remarks were based upon a misunderstanding on our part of an account given to one of our representatives. It will be realised that during an event like the Schneider Contest it is often a matter of extreme difficulty to collect reliable information concerning every incident which happens, and in spite of every care taken, errors do occasionally occur. In this case we are very glad to be able to place on record that, in point of fact, the Lodge plugs used in the S.6 machines gave no trouble whatever and went through the whole event

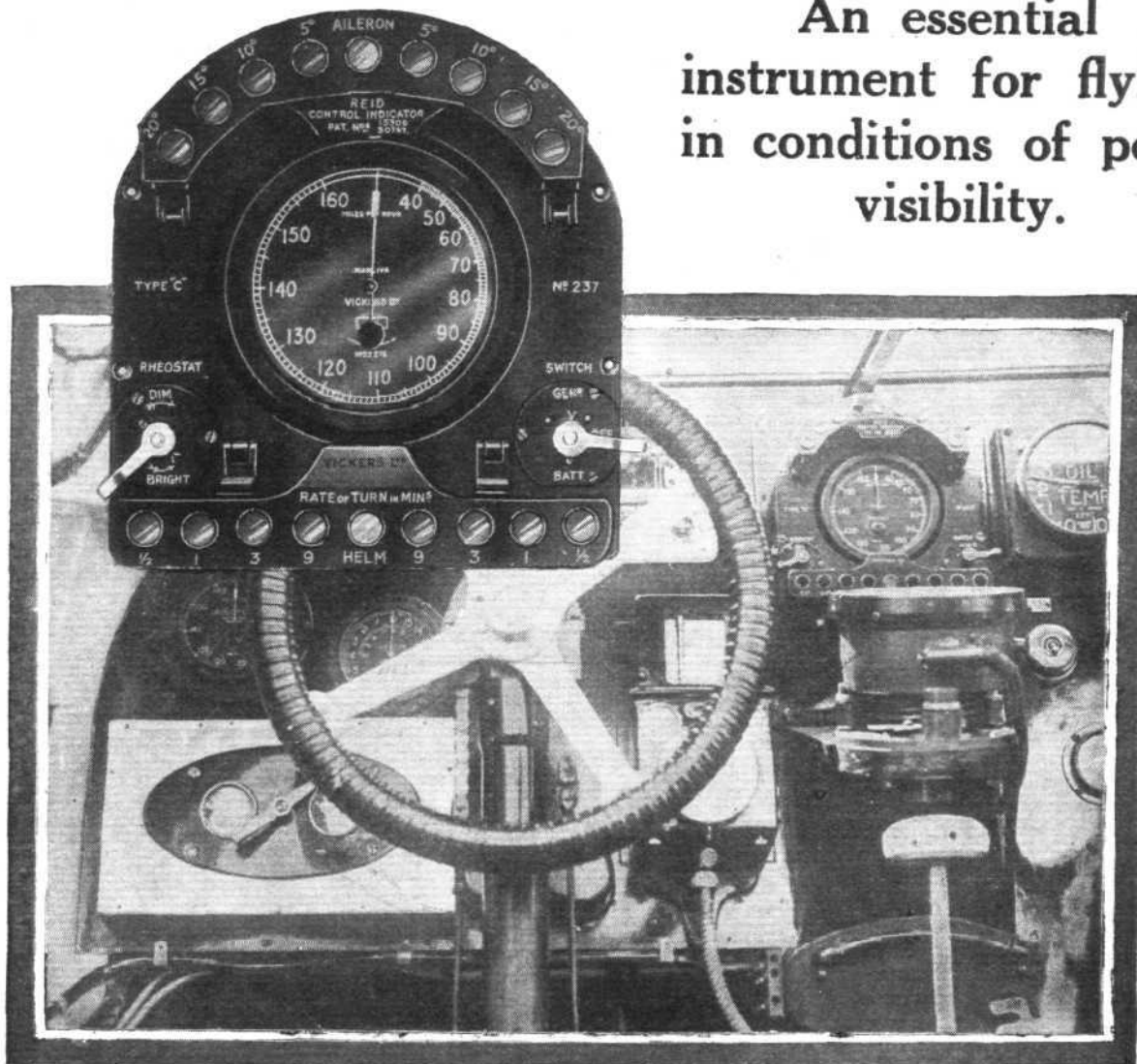
without any hitch or fault of any kind. That is a record of which the makers may justly be proud, and upon which they are to be warmly congratulated.

We understand that the following statement concerning Waghorn's engine was issued by Rolls-Royce, Ltd., although we do not appear to have received a copy: "When Flying Officer Waghorn came ashore after the taxing trials he was asked if the engine of his machine was satisfactory. He said that it had run perfectly, but it had popped once. A minute examination was made, and in the early hours of Saturday morning it was noticed that one of the sparking plugs had on the electrode a tiny fragment of aluminium, and also a trace of water. This indicated that there was some trouble inside that particular cylinder case, and it was found that there was a crack in the side."

Thus, so far from the sparking plug being the cause of the damage, it was actually the means of disclosing that damage existed, and the plug itself was in perfect order.

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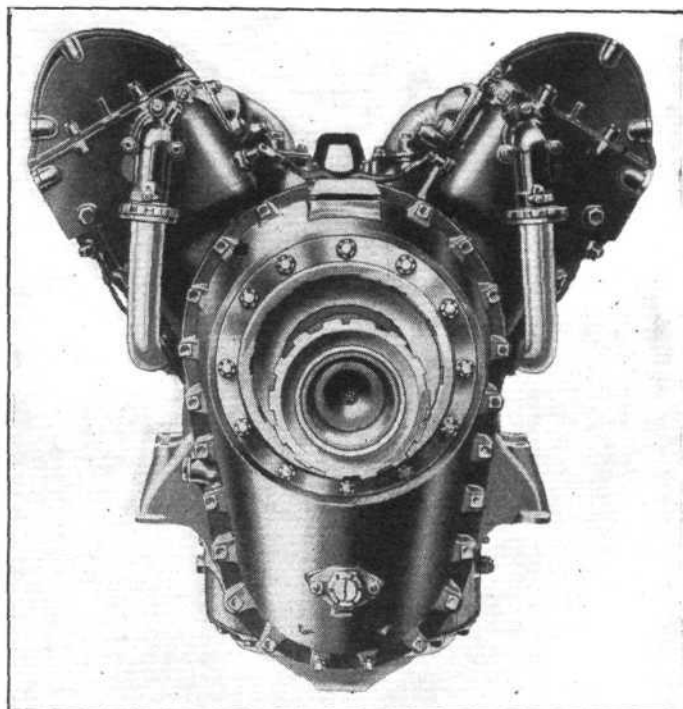
WORLD'S SPEED RECORD BROKEN AGAIN

Squadron-Leader Orlebar Raises Record to 357.7 m.p.h.

ON Thursday, September 12, yet another attack was made on the world's speed record over the 3 km. straight-line course laid out over Southampton Water. Earlier in the week Squadron-Leader Orlebar, Captain of the 1929 British Schneider Team had, as recorded in FLIGHT last week, put up a world's speed record over this course of 355.8 m.p.h., flying the Supermarine S.6 with Rolls-Royce racing engine, on which Flying Officer Waghorn won the Schneider Trophy Contest. On September 12 Squadron-Leader Orlebar flew the same machine, and succeeded in raising the record to 357.7 m.p.h.

Shortly after 4 p.m. the S.6 was launched, the weather conditions having improved, and Orlebar made an excellent take-off from a perfectly smooth sea. Actually six runs of the course were flown, of which those taken into account for the record were the second, third, fourth and fifth.

The conditions governing the granting of world's speed records by the F.A.I. demand that the straight-line course shall be flown twice in each direction, and Orlebar's speeds on the four runs upon which the claim to the record is based were as follows: Second run, 354.6 m.p.h.; third run, 358.7; fourth run, 352.5 m.p.h.; fifth run, 365.1 m.p.h. Average speed over the course, 357.7 m.p.h. (approximately 576 km./h.). The record is still subject to homologation by the F.A.I., but as photographic timing was employed, there is not the slightest doubt that the flight will be recognised as an official world's speed record.



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MORE THAN SIX MILES A MINUTE: Sqdn.-Ldr. Orlebar coming ashore after establishing a new World's Speed Record in the Supermarine S.6. During the flight he must repeatedly have exceeded a speed of six miles a minute, and very probably at times he was doing nearly 400 m.p.h.!

THE LA BAULE SEAPLANE MEETING



M. Louis Bleriot and Sir Sefton Brancker watch the proceedings.

AN important two-day seaplane meeting, organised by the Aero Club de France, in conjunction with the Paris daily, *Le Journal* and the Municipality of La Baule, took place last Saturday and Sunday, September 14 and 15, in La Baule Bay, that beautiful sheltered sheet-water situated along the western coast of France.

It was the first meeting of any size held in France devoted exclusively to seaplanes and amphibians. It has been felt for some time past that not enough attention is devoted to these machines that are so useful and essential to countries with long sea coasts and distant colonies. It is pointed out also that the progress in seaplane construction has been slower than that of land machines, and that the general public is not so well acquainted with the possibilities of their development and the facilities that they can offer.

Bearing in mind the above situation the Aero Club of France arranged a varied and interesting two-days' programme at La Baule, which comprised: An International Rallye terminating at La Baule Bay. A Speed Race for seaplanes capable of doing more than 400 km. per hour; a Handicap

Race; and an Altitude Competition. Three hundred francs in prizes were distributed in the above contests, as well as several valuable art objects.

The French Naval authorities also assisted in making this meeting a success, sending two squadrons of seaplanes from the Brest and Cherbourg bases. A flotilla of destroyers was also present. The seaplanes executed a number of manoeuvres, including the dropping of a smoke screen, mimic combats, flying in various formations, etc. There were also exhibitions of aerial aerobatics and stunt flying each afternoon by the well-known French Aces, Michel Detroyat, Sadi Lecointe and Morin.

A light haze, with consequent poor visibility, overhung La Baule Bay last Saturday morning. The two squadrons of French Naval seaplanes, comprising seven CAMS, 37's, single-motor observation machines equipped with 450 h.p. Lorraine Dietrich engines, and two Farman "Goliaths" bi-motor bombardment machines, equipped with pontoons and mounting two Jupiter 480 h.p. motors, lay at anchor a short distance out in the bay. The flotilla of two French



LA BAULE: The Bleriot 195 seaplane, with four 250 h.p. Hispano-Suiza engines, which was withdrawn from the Rallye and did not start.

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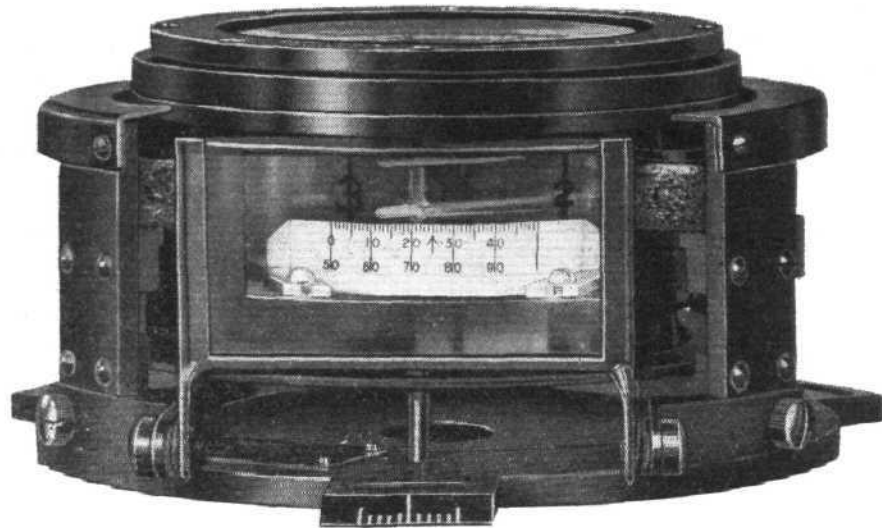
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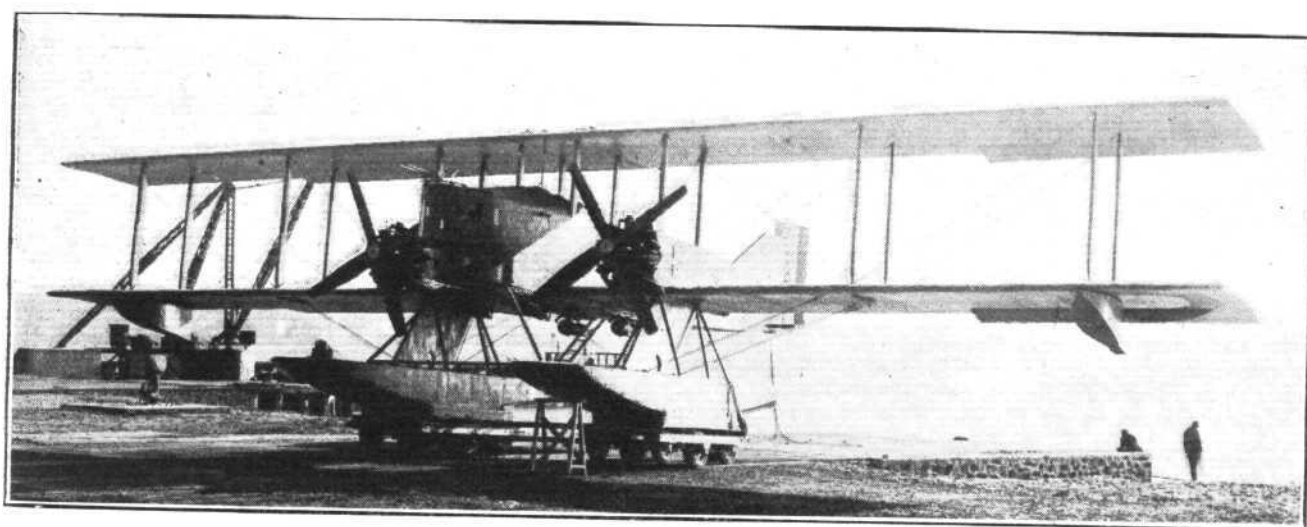
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SEAPLANES AT LA BAULE



We show above three types of seaplanes, which took part in the seaplane meeting at La Baule. At the top is the C.A.M.S. 37 flying boat, powered with a 450 h.p. Lorraine-Dietrich engine; several of these were entered by the French Navy. The latter also sent some Farman "Goliath" (168) bombers, fitted with two 480 h.p. "Jupiter" engines, one of which is shown in the centre. The third machine is the Schreck F.B.A. Flying Boat.



LA BAULE : A section of the large crowd which attended this flying meeting, in which both Service and Civil seaplanes took part.

Naval destroyers, the *Marocain* and the *Tonkinnais*, and the gunboat *Arras*, were also at anchor nearby. The beach and portion of the boardwalk in front of the Hermitage Hotel had been "roped off" and was reserved for the official guests, the Commissaires of the meeting, and the Press. The official headquarters were located in the Hermitage Hotel.

The CAMS 37 is a three-seater flying-boat especially adapted for reconnaissance or gunnery spotting. It is fitted with a 450-500 h.p. engine, such as the Lorraine Dietrich, the Hispano-Suiza, Renault, etc. A reduction gear is usually employed. The central hull comprises three cockpits. The observer, the gunner, the bomber, or the wireless operator sits in front. The pilot in the centre is

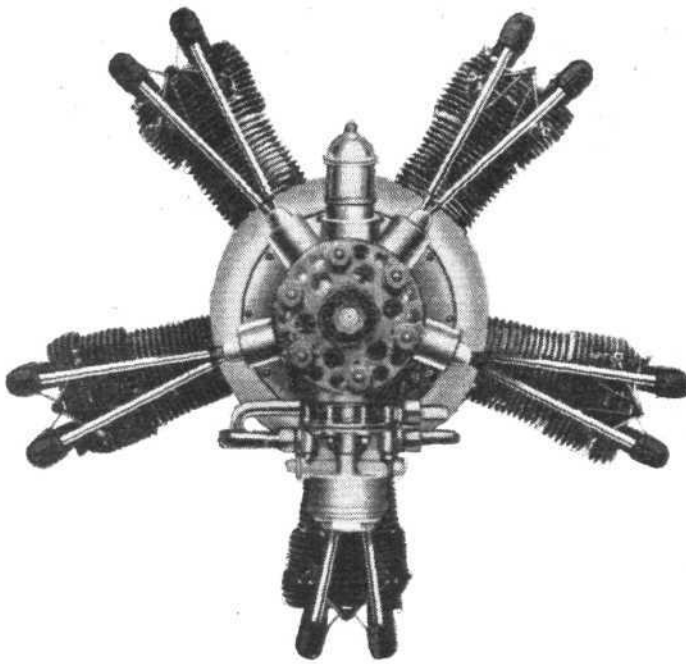
well ahead of the wings. Aft of the wings is the gunner with the dual control. The hull is formed with a single-step keel, and with a double-curved bottom provided with a three-ply lining. The hull is composed of compartments rendered independent of each other by reinforced watertight bulkheads. The upper and lower wings are of equal span and are made to fold back. The CAMS 37 can be fitted with an undercarriage and used as an amphibian. This landing gear can be quickly raised or lowered by the pilot. The following characteristics of this machine may be of interest.

Span of wings, 14.50 m.; total length, 11.43 m.; height, 4.04 m.; wing area, 58 sq. m.; total weight, 2,700 kg.; weight empty, 1,800 kg.; total load, 900 kg.; weight per

A BRITISH VISITOR AT LA BAULE : Air Vice-Marshal Sir Sef-ton Brancker flew to La Baule in the Saunders "Cutty Sark" flying boat (two "Cirrus" Hermes engines) seen here after arriving from England.



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5 cylinders 4.25" or 108 mm. \times 4.5", or 114.3 mm., 319 cubic inches or 5.23 litres. Compression ratio, 5.23 to 1. Normal r.p.m. 2,200. Rated normal B.H.P. at sea level, 100, actual 103. Maximum B.H.P. at sea level, 110. Weight complete with two magnetos, carburettor, air intake, propeller hub and tachometer drive, 250 lbs. or 113.5 kgs. Overall measurements: diameter 38" or 95 m. Length 36.2" or 905 m.

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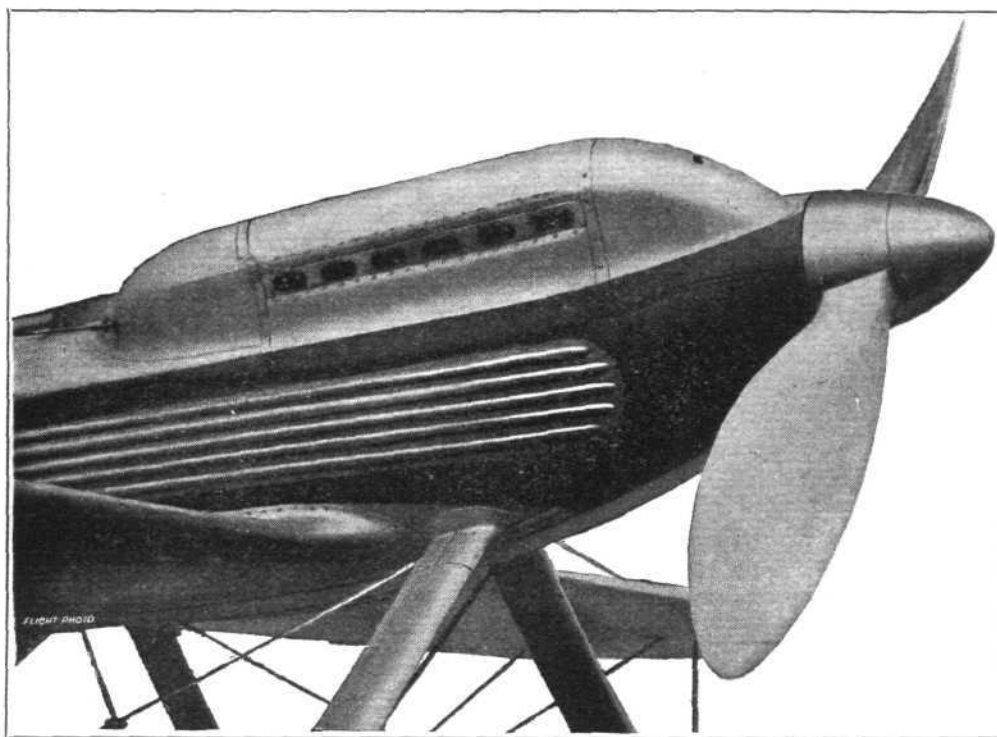
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* These parts made from Firth Staybrite Steel (D.T.D.42).

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h.p., 6 kg.; speed range, 85 to 190 k.p.h.; ceiling, 4,500 m.; climb to 3,000 m., 25 mins.; load factor, 7.5.

The CAMS 37 is a seaplane that handles easily and is well suited for reconnaissance work. It was used by Commander Guilbaud on his African and Mediterranean flights.

The reconnaissance group of CAMS seaplanes was supplemented at the La Baule meeting by a squadron of heavy bombardment planes of the well-known Farman "Goliath" type. These big machines, equipped with pontoons and powered with two 480 h.p. "Jupiter" air-cooled motors, with a Farman reduction gear, weigh 4,000 kg., and transport a useful load of 2,900 kg. They have a maximum speed of 176 k.p.h., and can climb to 3,000 m. in 31 mins. 4 secs.

Promptly at 10.30 o'clock on Saturday morning, on the firing of a cannon, a squadron of five CAMS planes "took off" and went through a series of manoeuvres. Coming in from the bay they flew in line over the official stand in front of the Hermitage Hotel, and then broke out in formation and, circling again over the harbour, they disappeared out to sea. Returning again in formation, these seaplanes went through a series of landing and "take off" manoeuvres, which were perfectly executed, and in which they were joined by the squadron of "Goliath" bombardment planes.

The manoeuvres of these Naval seaplanes were resumed in the afternoon. A mimic battle between the CAMS and the "Goliath" planes took place, and a seaplane squadron "bombarded" the destroyer flotilla at anchor in the bay. Another group composed of three CAMS each flying at different altitudes dropped a "smoke screen" in front of the destroyers. First one plane, flying at a height of about 150 m., suddenly emitted a long trail of smoke, then another machine flying at a somewhat higher altitude, gave out a similar one, which settled down, joining the first screen, thus adding to its height. This protection lasted for several minutes and completely hid the warships from view. The "Goliath" planes also dropped bombs on a raft moored out in the harbour and set it on fire. These afternoon manoeuvres were also well executed, and were accomplished without a hitch of any kind.

During these Naval seaplane exercises an exhibition of stunt flying was given by Sadi Lecoq on a Nieuport pursuit plane 62, by Michel Detroyat on his Morane-Saulnier machine, and by Morin, the chief test pilot of the Loire Co., flying a Gordou-Lesieur Loire pursuit plane.

At 5.10 p.m. the first arrival of the seaplanes participating in the Rallye—a Loire & Olivier 198, equipped with a 420 h.p. "Jupiter" motor—took place. This seaplane, which was piloted by Ponce, belonged to the Air Union Aeronavale Co., and had started from Marseilles, making two landings en route. At 5.50 p.m. the Baron Bernhard de Precourt came in on his Schreck 17, 180 h.p. Hispano-Suiza motor. He was followed at 6.17 p.m. by Tanguy on his Villiers-Schreck seaplane, Hispano-Suiza 180 h.p. motor; at 6.28 by Capt. Challe on Schreck F.B.A., Lorraine-Dietrich 450 h.p. motor; and at 6.30 by Paumier on Schreck F.B.A., Lorraine-Dietrich 450 h.p. motor.

These machines arrived from many different parts of France. Some starting from Paris, others as far South as Marseilles. Under the regulations of the contest the planes could "take off" at any time after 4.30 a.m. Saturday morning. They were required to make a flight of at least 200 km. before arriving at la Baule and could make as many landings as they desired, providing that they were "checked" at each of them and that the landings were at least 100 km. apart. As there were amphibian planes taking part in the Rallye an additional allowance was made for machines that flew over the sea, that portion of the flight being multiplied by a coefficient of 1.5, providing it was at least 30 km. distant from land.

The classification of the contestants was made according to the following formula: $\frac{L^2}{W}$ in which L represents the distance traversed, and W represents the horse power per passenger transported including the crew.

The following standing of the contestants was announced by the Contest Committee of the Aero Club of France, subject to subsequent verifications:—

Winner.—Bernard de Precourt flying a Schreck amphibian 17, Hispano Suiza motor, 180 h.p. (two persons on board). Flight of 1,204 km., starting at Marignane and making landings at Perpignan, Toulouse, Bayonne, Hourtin, Angers, before arriving at la Baule, five landings in all. He was allowed extra points for flying an amphibian.

Second.—Captain Leon Challe flying a Schreck FBA, Lorraine Dietrich 450 h.p. motor (six persons on board).

Made flight of 1,236 km. starting at Hourtin and flying over Hendaye, Hourtin, Hendaye, la Baule, making one landing.

Third.—Pierre-Marie Tanguy flying a Villiers Schreck, Hispano Suiza motor 180 h.p. (four persons on board), started from Arcachon and making landings at Biarritz, St.-Trojan, St. Nazaire, Lorient before arriving at la Baule, making a flight of 779 km. with four landings.

Fourth.—The Air Union Aeronavale plane, Leo 198 (Liore and Olivier 198) piloted by Ponce, "Jupiter" air-cooled motor 480 h.p. (eight persons on board). Started from Marseilles and made landings at Arcachon and Biarritz, before arriving at la Baule, making a flight of 903 km. with two landings.

Fifth.—Pilot Engineer Emile Paunier flying a Schreck Amphibian FBA, Lorraine-Dietrich motor, 450 h.p. (five persons on board), "took off" from Argenteuil (Paris Suburb) and made a landing at Tours before reaching la Baule. Distance traversed 457 km. He was allowed a handicap of a certain number of points for flying an amphibian.

The other machines entered in the Rallye were cancelled. On being interviewed on their arrival the various contestants declared that they had encountered a light fog with poor visibility during the early part of their flight, otherwise the trip was without incident.

The winner of the Rallye, Baron Le Vavasour de Precourt is strictly an amateur. He personally owns the Schreck Amphibian 17 in which he made the flight as well as a Morane-Saulnier 130 land plane, Salmson 230 h.p. motor. The Baron received his pilot's licence in 1928 and has made numerous flights since then, totalling some 220 hours in his personal planes. He made a trip last winter starting from Antibes, and flying over Italy and return, touching at Ajaccio, Bastia, Naples, Rome and Pisa. The Baron resides at Saint-Tropez in the South of France, where he has constructed a private hangar to house his planes. He was the only amateur pilot taking part in the Rallye.

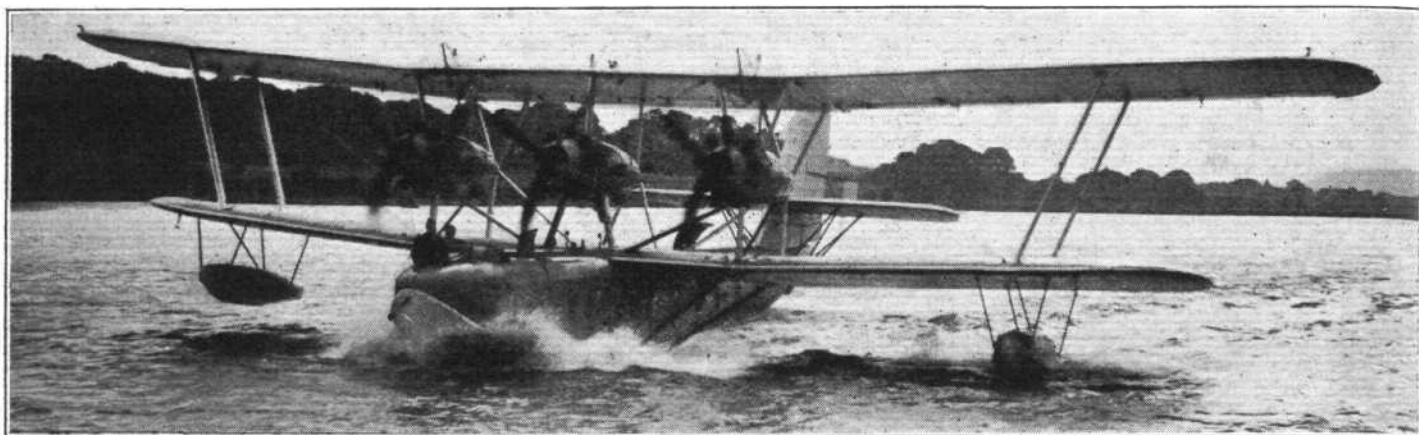
As winner of the "Rallye" the Baron de Precourt received a cash prize of 50,000 francs and the Aero Club Cup valued at 10,000 francs. The second prize consisted of 20,000 frs., the third of 15,000 francs and the fourth and fifth prizes of 5,000 francs each. A sixth prize of 5,000 francs was also offered but as there were but five entries, it was distributed *pro rata* among them.

A large and enthusiastic crowd watched the naval seaplane manoeuvres and other aeronautical events of the opening day. M. Pierre Etienne Flandin, President of the Aero Club de France, welcomed the distinguished guests in the official enclosure, which had been roped off opposite the Hermitage Hotel, fronting on the beach. Among those present were M. Francois Poncet, Under-Secretary of State for Fine Arts, who represented the French Government; Marshal Franchet d'Esperey, Commander of Aviation Forces in the World War; Admiral Estiva, Chief of Naval Aviation; Admiral Pirot, Prefet Maritime at Brest; Count de Lapeyrouse, Mayor of La Baule; Senator Babin Cheveye, of the Loire Inferieure Department; Commander Garin, representing the President of the Republic; and Count Henry de la Vaulx, President of the Federation Aeronautique Internationale (Associated Aero Clubs). The Count flew down from Paris, accompanying Paumier in the Schreck Amphibian plane. Louis Blériot and Jean l'Hommede, of the C.A.M.S. Co., were among the French constructors present. Wing-Comdr. Smith-Piggott, British Air Attaché, representing British Aviation, and Commander W. D. Thomas, Assistant U.S. Naval Attaché for Air; John J. Ide, Technical Assistant for Europe of the U.S. National Advisory Committee for Aeronautics; Grover Loening, a director of the Curtis Wright Co., and R. C. Wood, of the National Aeronautics Committee, American Legion, were among the others attending the meeting.

Sir Sefton Brancker, Director of British Civil Aviation, arrived at 6.30 p.m. on a Saunders "Cutty Sark," a bi-motor flying boat equipped with 110 h.p. "Cirrus-Hermes" engines, piloted by Chilton. Sir Sefton was accompanied by Mr. J. T. Pitt, its owner, making three in the plane. He was delayed several hours by a heavy fog in the English Channel, having made a landing on the Island of Jersey.

A banquet was tendered the visitors in the evening by the Municipality of La Baule, which was largely attended. The Mayor, Count de Lapeyrouse, presided, and the speakers included M. Francois Poncet, Sir Sefton Brancker, and M. Pierre Etienne Flandin. At the conclusion of his speech M. Flandin announced that M. Louis Blériot would present a cup valued at 100,000 francs to be competed for annually as a speed race for land-planes.

The Handicap race for the Aero Club of France Cup was
(Concluded on page 1045)



"A CALCUTTA" FOR FRANCE

SOME time ago it was announced that the French Government, impressed by its excellent qualities, had placed an order with Short Brothers of Rochester for one of their all-metal "Calcutta" flying-boats fitted with "Jupiter" engines. Similar to the machines now in regular use on the Mediterranean section of the London-Karachi air route, this machine was completed a couple of weeks ago, when the French Ambassador, M. de Fleuriau, and the French Air Attaché, M. Lieutenant de Vaisseau Sala, visited Rochester and went for a flight in the new machine.

In the photograph at the top of this page the "Calcutta" is seen taxiing on the River Medway, with a remarkable absence of spray. On the right may be seen in and on the machine M. de Fleuriau, Mr. Mayer, of Shorts, Mr. Oswald Short, Lieut. Sala, and Mr. Mayer, of the Bristol Co.

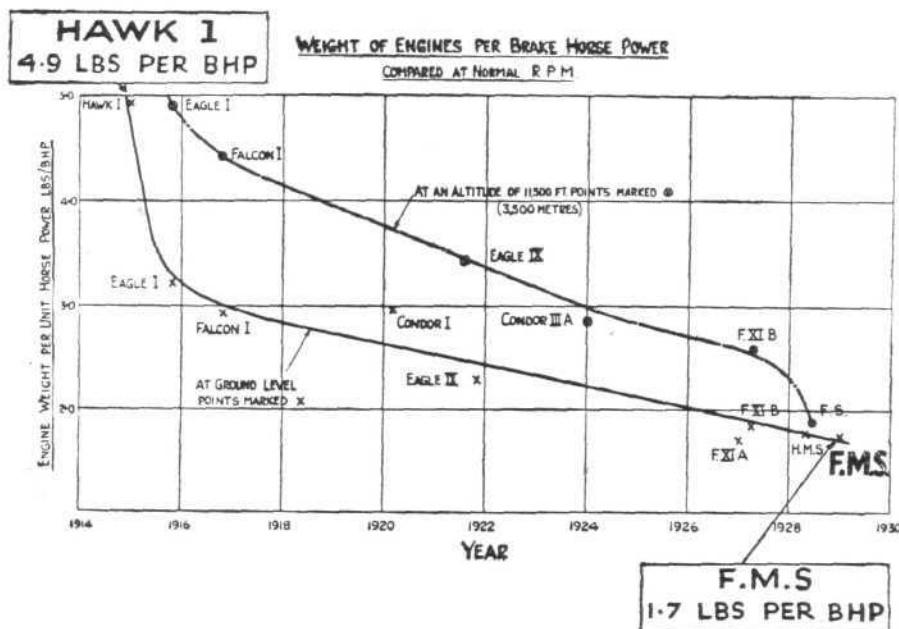
The lower group includes the same personalities, plus Mr. Short Jun., Mr. Wood, Mr. Gouge, Miss Graham, and Mr. Lankester Parker.

The French registration letters painted on the machine are F-A J O B, and those familiar with English slang and with the "Calcutta" will admit that she is!



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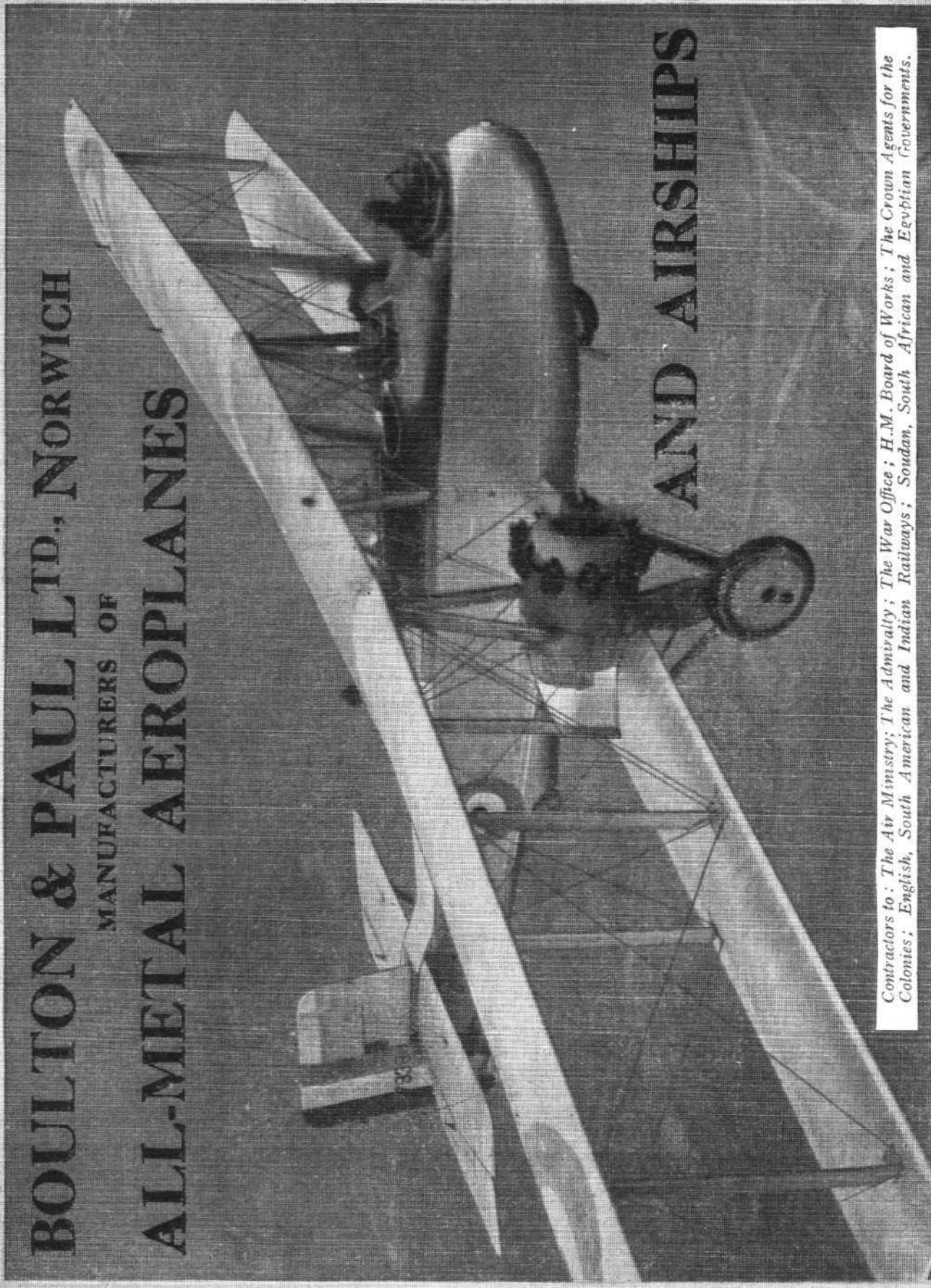


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["FLIGHT" Photograph]

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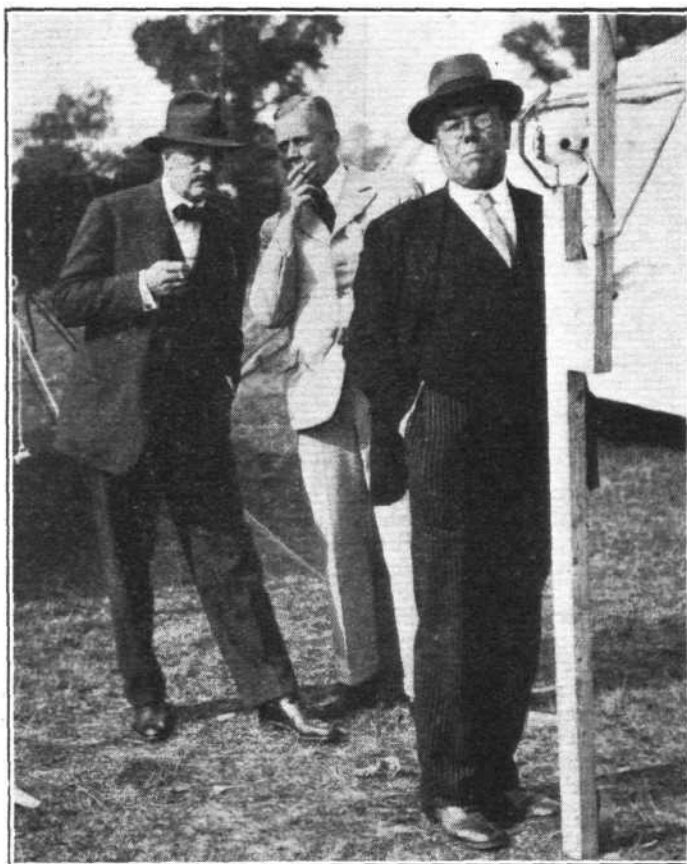
THE Leicester Club held their first meeting on Saturday, September 14, and a varied and attractive programme was arranged. Though the crowd fell short of the number expected by the club officials, one cannot help thinking that they should be very well pleased to have had as many there as they did. The aerodrome is seven miles from Leicester, and off the main 'bus routes, but in spite of this there must have been fully five thousand there which, when one realises that those without cars were asked to pay 2s. 6d. each way for the journey, was really a surprising number.

The support given by numerous private owners and others who could get machines was very gratifying, and there were about 34 machines present, the majority were light aircraft, of course, but there were also 4 Siskins and 2 D.H. 9's. The A.A., as usual, were present with their willing band of "air-scouts," and these very ably looked after things such as picketing the machines down, swinging airscrews and helping generally.

On one occasion at least, it was only their prompt and concerted action which saved an owner from what might have been a nasty accident. Early in the morning the wind dropped, with the result that those coming in found themselves with very little wind against them as they made their landing run across the narrow width of the aerodrome. On this particular occasion the owner looked like charging the bunch of machines which had already landed, but the A.A. leapt as one man, and hanging on the machine in festoons pulled it up with a foot or so to spare.

The Under-Secretary of State for Air, Mr. Fred Montague, arrived in the Gipsy-Moth G-AAGE, a Coupé model, with Flight-Lieut. P. P. Grey as pilot.

After the usual photographs had been taken, the Lady Mayoress, Mrs. Montague, Mr. Montague, the Lord Mayor and sundry club officials lined up in front of the club's Moth,



Mr. Montague, the Under-Secretary of State for Air, pronouncing his opening words, while behind him are Mr. H. Purt, the Secretary of the Club, and Mr. Walker, Vice-President. ("FLIGHT" Photo.)



The Desford Aerodrome from above. ("FLIGHT" Photo.)

Flight - Lieut. Trench with his Rally winner, Avro Avian, fitted with a "Cirrus - Hermes" engine

("FLIGHT" Photo.)



and Mrs. Montague christened it the "Quorn." The ceremony, of course, required the loss of a perfectly good bottle of wine, but on this occasion the aircrew boss did not suffer—as one has seen it do at other times—because the bottle was chastely secreted in a table-napkin, suspended from the boss, and the fatal deed done with a hammer!

The first of the visiting pilots to arrive after the hour of noon had struck was said to be the winner of the Rally. This proved to be Flight-Lieut. Trench, who came in Capt. Stack's late King's Cup Hermes Avian.

After lunch, the show-proper started with a demonstration of aerobatics. Several pilots obliged, and some good flying was seen. Following this, the "Quorn" challenged the winner of the Rally to a race (?). Of course, the "Quorn" naturally knew his own country best, and when it came to hedging—well, he knew just where the gaps were, so he must have had a very unfair advantage, but the Avian was not far behind and by riding recklessly he pulled up and crossed the finishing line dead level!

The next event was the formal opening of the aerodrome by the Under-Secretary. He did so with the aid of the broadcasting arrangements, and a very able speech in which he outlined the aims of such clubs and emphasised the importance of aviation to the country.

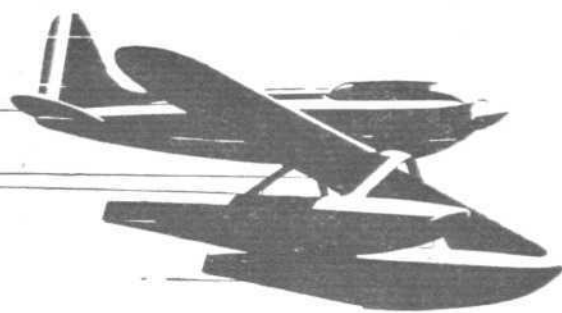
A large number of the visiting pilots then took part in the parade, which entailed taxiing past the enclosures, taking off and flying round once or twice before landing. While this was in progress a car was out on the aerodrome for the usual bombing event. This time the performance was enlivened by having a very large *papier-maché* effigy as a passenger which caused much amusement by its antics. Several private owners tried their hand with the "flour bags," and mostly found that it was harder than it looked.

Mr. Tranum then went up in a Moth and did a drop with a new type Russell Lobe parachute. This parachute is the same overall size as the standard type but the lobe has been somewhat enlarged. The result appeared entirely satisfactory and the rate of descent has been brought down to



Mr. Geoffrey de Havilland, Jr., adds a few more hours to EBTD's score. ("FLIGHT"

Photo.)



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Sqdr. Ldr. A. H. Orlebar, A.F.C., R.A.F.

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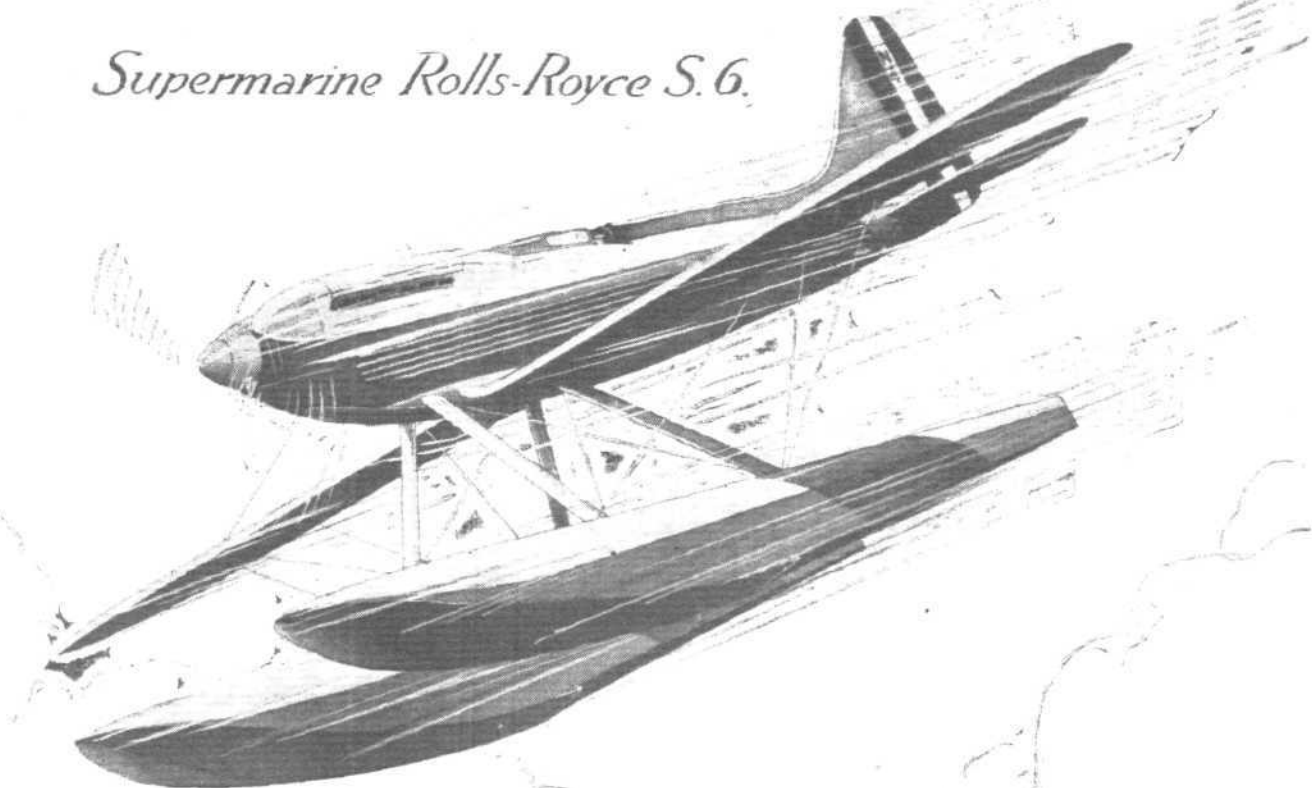
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The Schneider Trophy winner of Sept. 7th, 1929.

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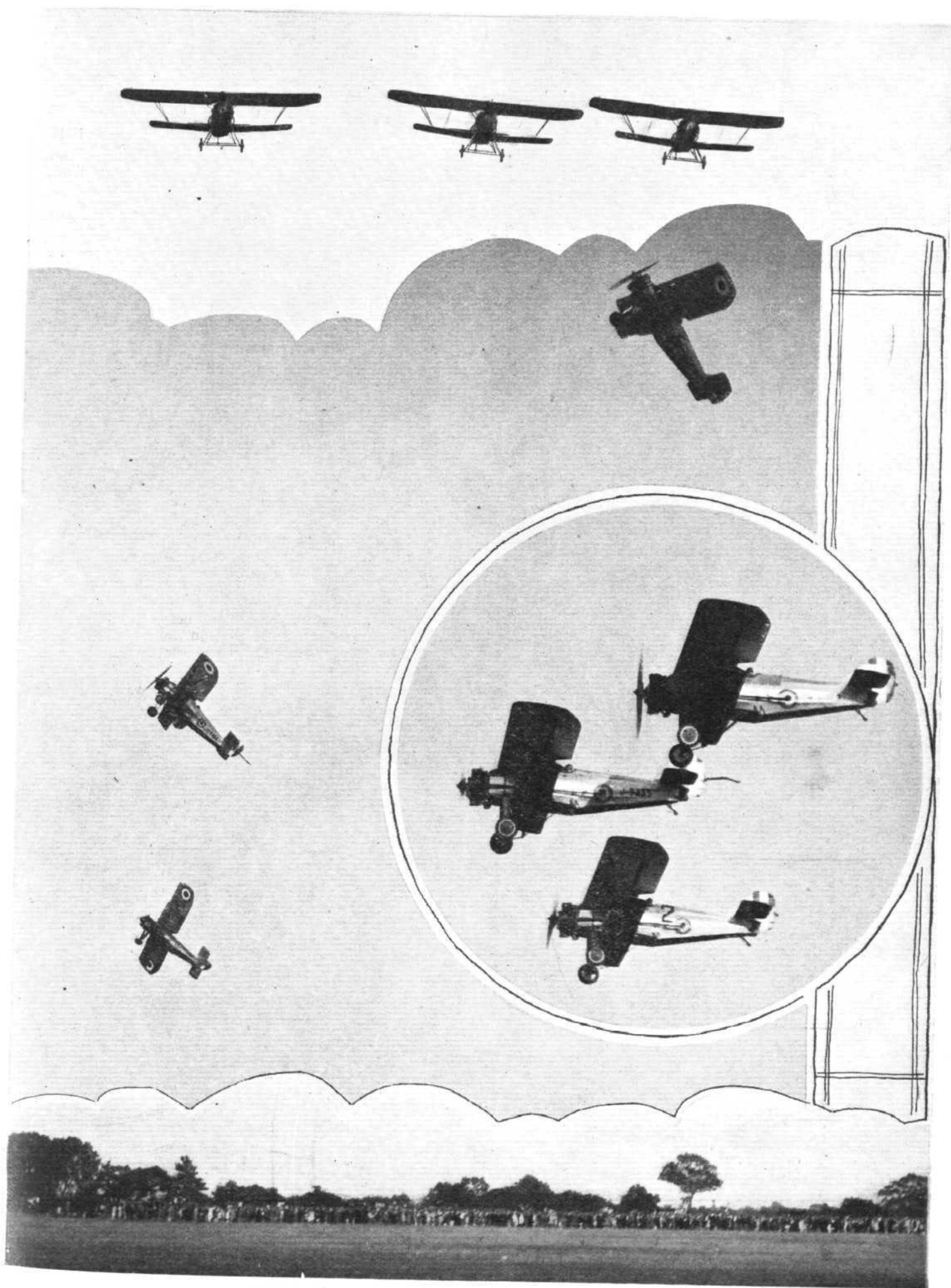
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AT LEICESTER



Siskin manoeuvrings : The R.A.F.'s part in the meeting. ("FLIGHT" Photo.)



The Under-Secretary leaves for London in the DH Gipsy Moth piloted by Mr. P. P. Grey. ("FLIGHT" Photo.)

16 ft. per second, moreover the already noticeable steadiness has been increased.

Balloon bursting was the next item on the programme. Two gas-filled balloons were released and rose very quickly, so quickly, that some of the competitors failed to get up to

them at all. Several of the visiting pilots entered for this event, but the first few took so long chasing their rapidly flying balloons that the remainder had to forgo their shot at it. Two pilots at least showed that this was not their first attempt as they "killed" their targets in less time than it takes to write this.

A landing competition was held wherein the competitors had to land in front of a mark; the winner being the one who stopped nearest to it. The results were all very close and as far as one could learn no prize was given to the winner.

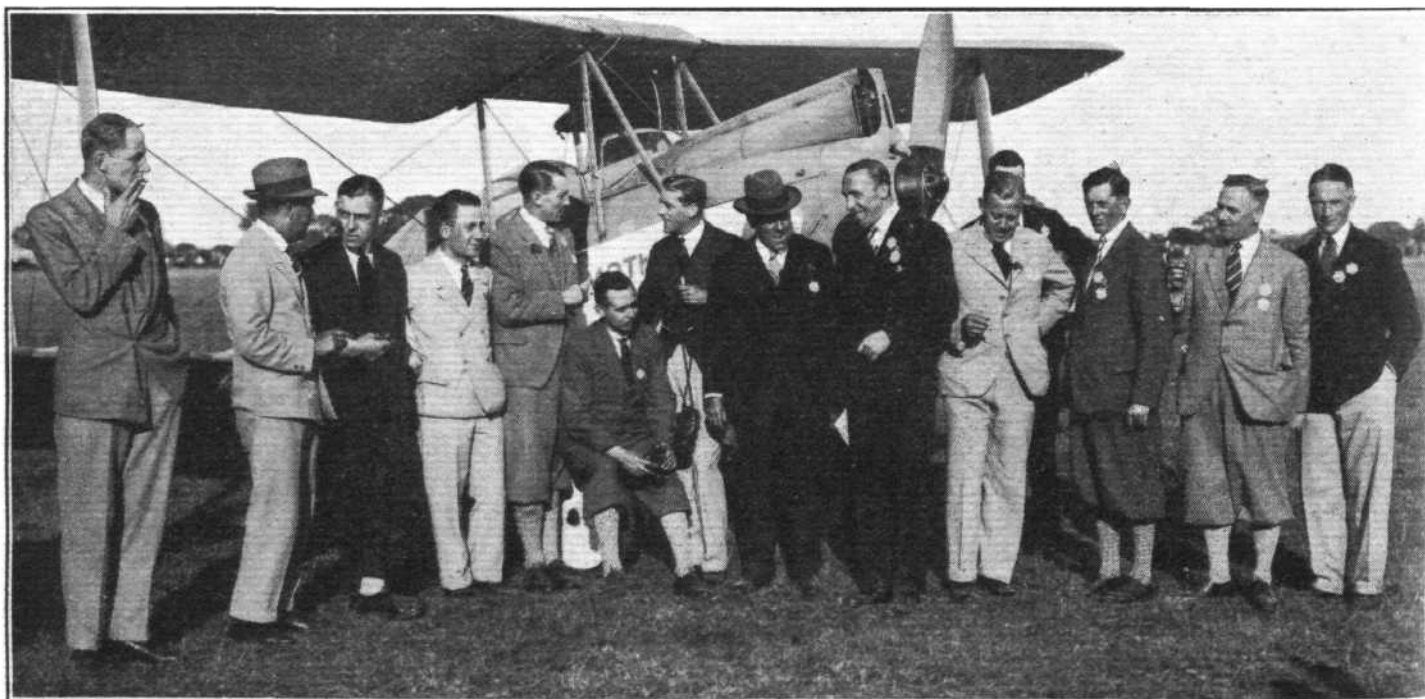
A flight of Siskins from Grantham then gave an aerobatic display. The pilots were Flight-Lieut. Fleming, Flying Officer Lawn and Flight-Sergt. Marsh. They started with a small amount of formation flying, turning and diving at the aerodrome and so on, and then they did individual aerobatics while the disengaged pair patrolled above in formation. They went through the usual repertoire of aerial contortions including an incipient tail-slide with the engine on the point of packing up! (an impromptu thrill!). The spectators were not sophisticated and there was no doubt about them enjoying the roar of the Jaguar engines when the machines were dived over their heads.

Flight-Lieut. de Burgh also came over from Halton and gave two or three exhibitions.

After this proceedings broke up somewhat, and in spite of repeated entreaties from the loud speakers the crowd swarmed across the aerodrome and around the machines until finally the police had to enlist the boy-scouts with their staves to form a barrier. When the machines were more or less free, joy-riding was started and the club's own machine was backed up by certain sportsmen who always attend these meetings and help everyone to the best of their ability.

In the evening the club gave a dance at the Oriental Hall which was well attended and a great success, several of the visitors were so well looked after that they were very near stalling point when closing time came, and required assistance to prevent them going into a flat spin!

Taken all round, the club is to be congratulated on their first meeting. They will no doubt have learnt much from their mistakes and their subsequent shows will benefit. The policy of the club seems to be to run it as a business proposition and in that they will have the assistance of many hard-headed business men, of the type for which Leicester is well known, so that there seems every chance of their success; a success which we hope they will achieve.

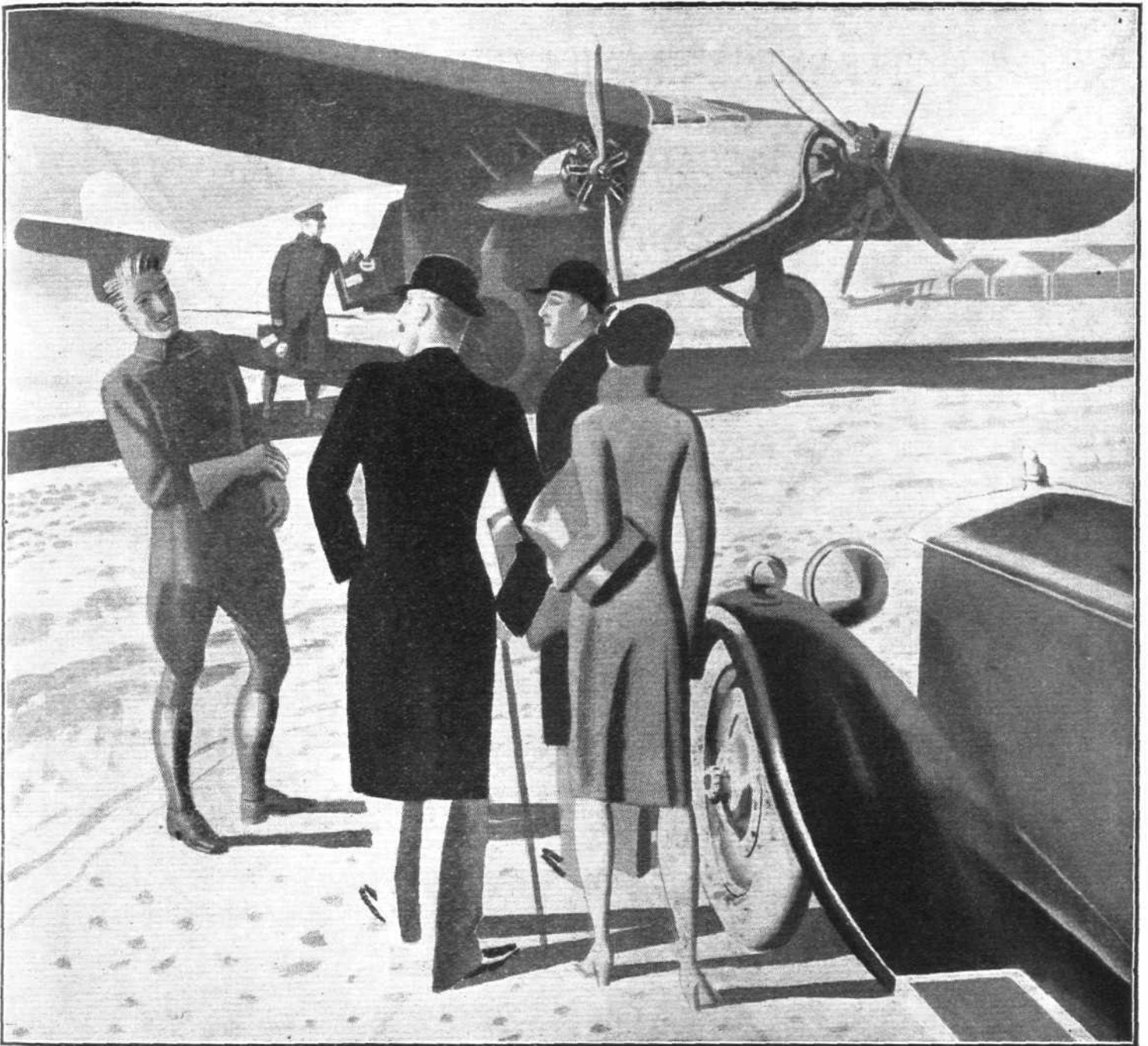


THE UNDER-SECRETARY AT LEICESTER WITH SOME OF THE CLUB OFFICIALS: Left to right, R. C. Johnson, W. Harris (Managing Director, Northants Aero Club); O. Jones, G. P. Haylock, Flight-Lieut. R. L. Bateman (Pilot Instructor, Leicester Aero Club); A. E. Coltman, P. P. Grey (De Havillands); F. Montague, M.P., (Under-Secretary of State for Air); N. W. R. Maule, H. Purt (Hon. Secretary); R. C. Winn (Chairman of Committee), F. W. C. Marshall, E. A. Underwood.

Municipal Air Port Developments

THE formation of an air port to serve the Tyneside has been brought a stage further by a recent conference at Gateshead. Six sites were discussed in the light of the Air

Ministry's opinion upon them, and that at White Mare Pool near Pelaw-on-Tyne was considered the best for the whole of the Tyneside. A committee has been formed to further investigate the detail possibilities of this site.



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To cross London the business man uses his own car and it is now just as practical for him to travel across Europe in his own Avro 5.

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AVRO-5

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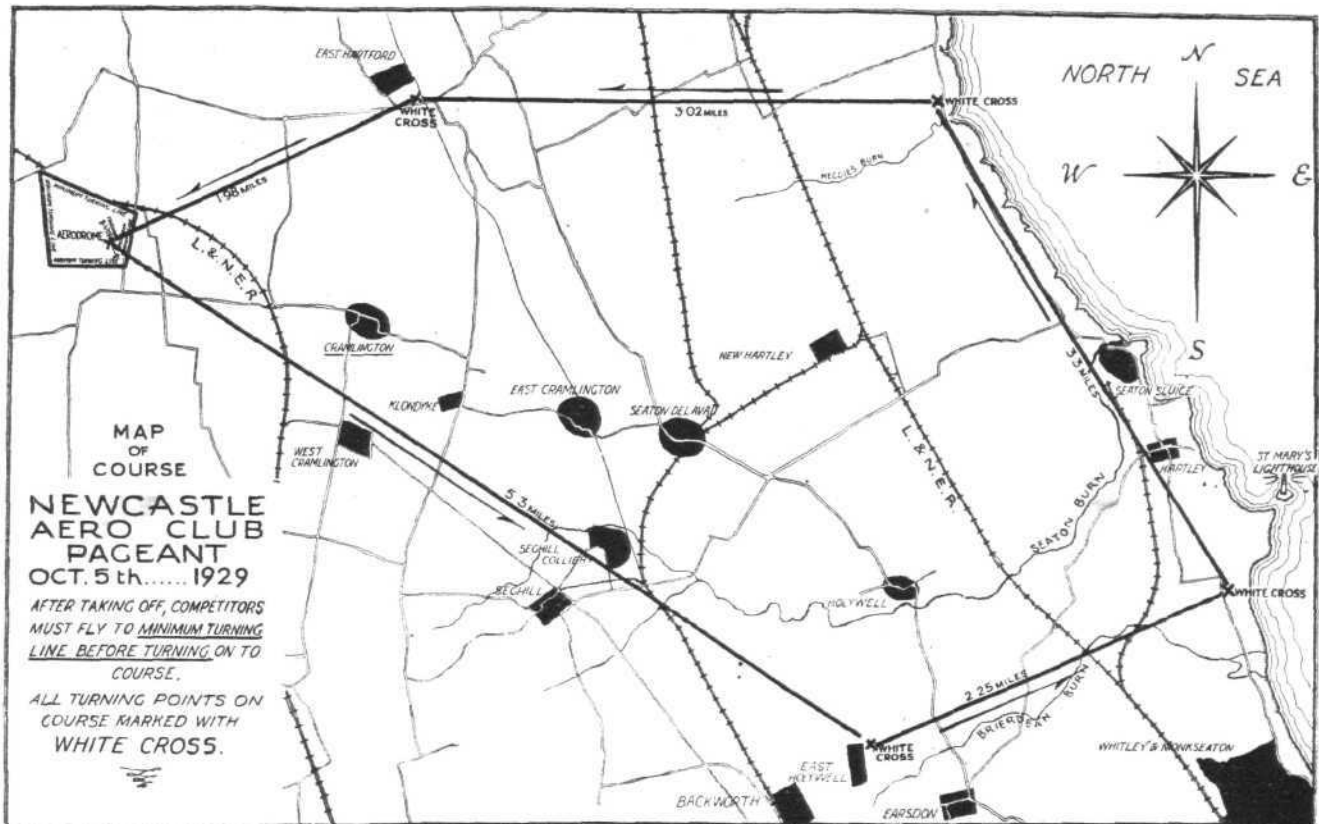
THE NEWCASTLE AIR PAGEANT

THE following particulars are to hand of the three races at the Newcastle Air Pageant, which will be held under the Competition Rules of the Royal Aero Club and the Regulations of the Fédération Aéronautique Internationale on October 5.

Air League Challenge Cup (Handicap) Race.—The race is open to light aeroplane clubs, and there is no restriction as to the number of competitors entered by each club. The aircraft must be the property of the club entering, or a member of the club. The pilot must be a member of the club entering. Paid pilot instructors are excluded.

included: petrol, oil and crew. The weight of water in the radiators shall count in the weight empty. The course is two laps (total distance 31.7 miles). The first prize is a challenge cup presented by the late Lord Edward Grosvenor and £100 presented by the *Evening World*; second prize, £15; and the third prize, £10.

The S.B.A.C. Challenge Cup (Handicap) Race.—This cup will be awarded to the Light Aeroplane Club which enters the aircraft which wins the race. The race is open to all light aeroplane clubs, and there is no restriction as to the number of competitors entered by each club. Competing



The race is open to aircraft, the weight empty of which must not exceed 1,200 lbs. Weight empty means total weight in flying order, the following weights not being included: petrol, oil and crew. The weight of water in the radiators shall count in the weight empty. The course is 1 lap (total distance 15.85 miles). The first prize is a challenge cup presented by Air League of British Empire, and £25; second prize, £10; and third prize, £5.

The Grosvenor Challenge Cup (Handicap) Race.—This cup will be awarded to the winner of the race which is open to any type of aeroplane, the weight empty of which must not exceed 1,200 lbs. Weight empty means total weight in flying order, the following weights not being

included: petrol, oil and crew. The weight of water in the radiators shall count in the weight empty. The course is 2 laps (total distance 31.7 miles). The first prize is a challenge cup presented by the late Lord Edward Grosvenor and £100 presented by the *Evening World*; second prize, £15; and the third prize, £10.

The race is open to aircraft, the weight empty of which must not exceed 1,200 lbs. Weight empty means total weight in flying order, the following weights not being included: petrol, oil and crew. The weight of water in the radiators shall count in the weight empty. The course is 1 lap (total distance, 15.85 miles). The first prize is a challenge cup presented by the Society of British Aircraft Constructors, and £50; second prize, £10; and the third prize, £5.

LANCASHIRE AERO CLUB AT HOME

ALTHOUGH the attendance of visiting pilots was small owing to a clash of dates with the opening of the Leicestershire Aero Club, the above event proved highly successful and enjoyable.

Two to three hundred members and friends filled the club-house and enclosure, and kept the catering department fully employed. The flying events included the landing competition for the Pemberton Trophy (won by Mr. Twemlow), a bombing attack upon a moving target (won by Mr. Scholes), a balloon-bursting contest (won by Mr. M. A. Lacayo) and an Aerial Treasure Hunt (won by Capt. T. N. Stack). This last event was a novelty, in which pilots were given written instructions by which to follow a course that ultimately led them to a ground signal indicating the buried treasure. On returning to the aerodrome, they had to trace out on the judge's map the course followed, and the site of the treasure. Not so easy as it sounds, but every competitor except one was successful, Stack winning on time by a short head.

A model aeroplane contest produced some humorous home-made efforts from both juniors and seniors, while a

height-judging contest produced some wild guesses, ranging from 200 to 14,000 ft.

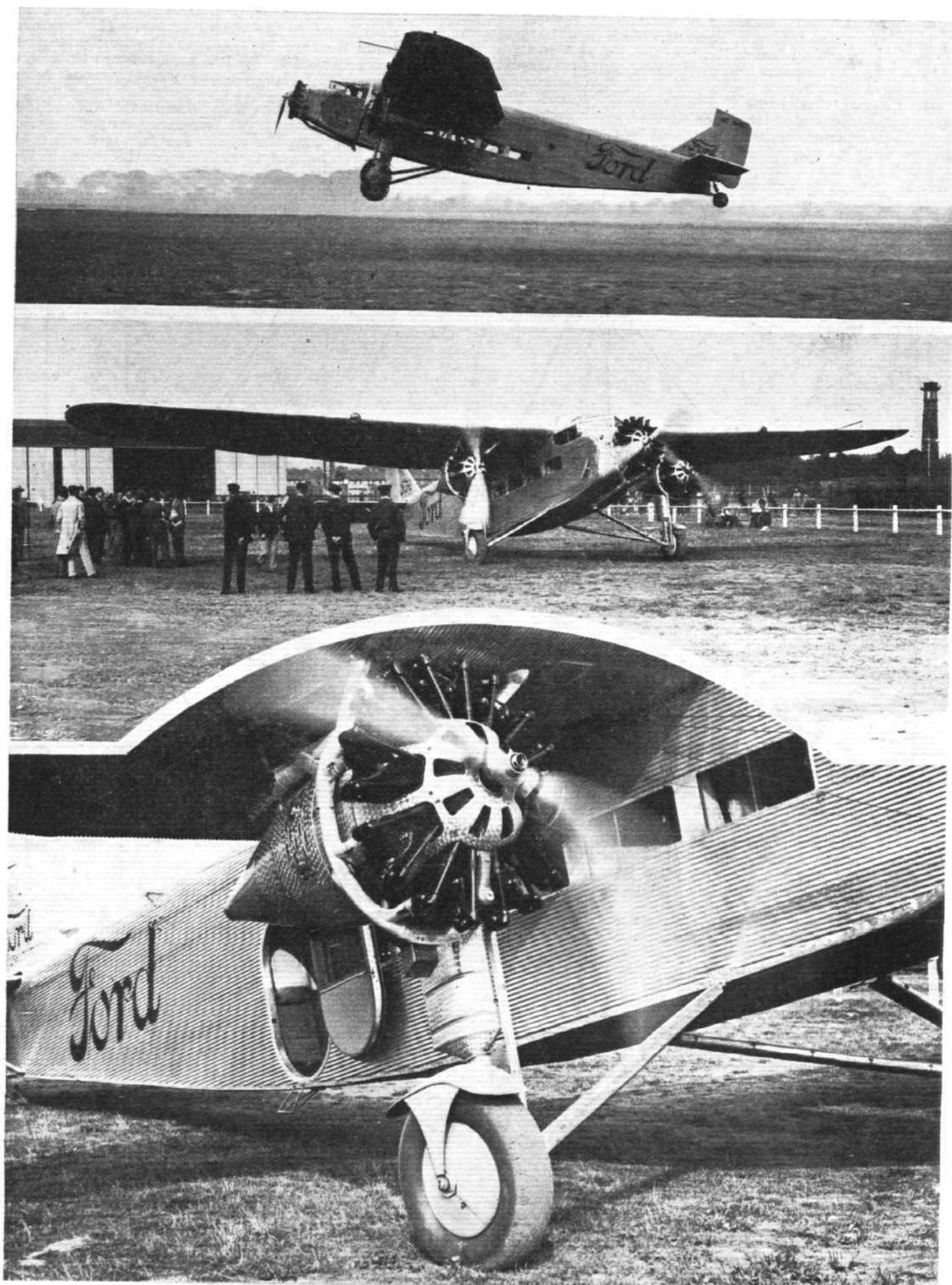
First-class flying displays were given by Capt. T. N. Stack and Mr. Schofield, both of National Flying Services, Ltd., on Moths, and by several R.A.F. pilots, whose anonymity shall be respected, upon Avians loaned by the Club and by A. V. Roe and Co., Ltd.

Tea and supper were served in the club-house, and after the latter event the veranda was cleared, and about 50 couples took the floor to the strains of sweet music. We can safely promise that the event will be repeated, and we hope next time to be able to give longer notice to our friends.

Fair Flyers

LADY BAILEY has taken on another job. This time it is the presidency of the new aviation group of the Forum Club. The group has already 80 members, although it has only been in existence about two months. The Hon. Mrs. Forbes-Sempill is the Chairman, and Mrs. Geoffrey de Havilland is amongst the members. Lord Thomson will be the guest of honour at the inaugural dinner of the group on October 21.

AN AMERICAN VISITOR



Three views of the all-metal Ford Commercial Monoplane, which recently carried out demonstrations at Croydon. This machine, which was exhibited at the Olympia Aero Show, has three 425 h.p. Pratt and Whitney "Wasp" engines.

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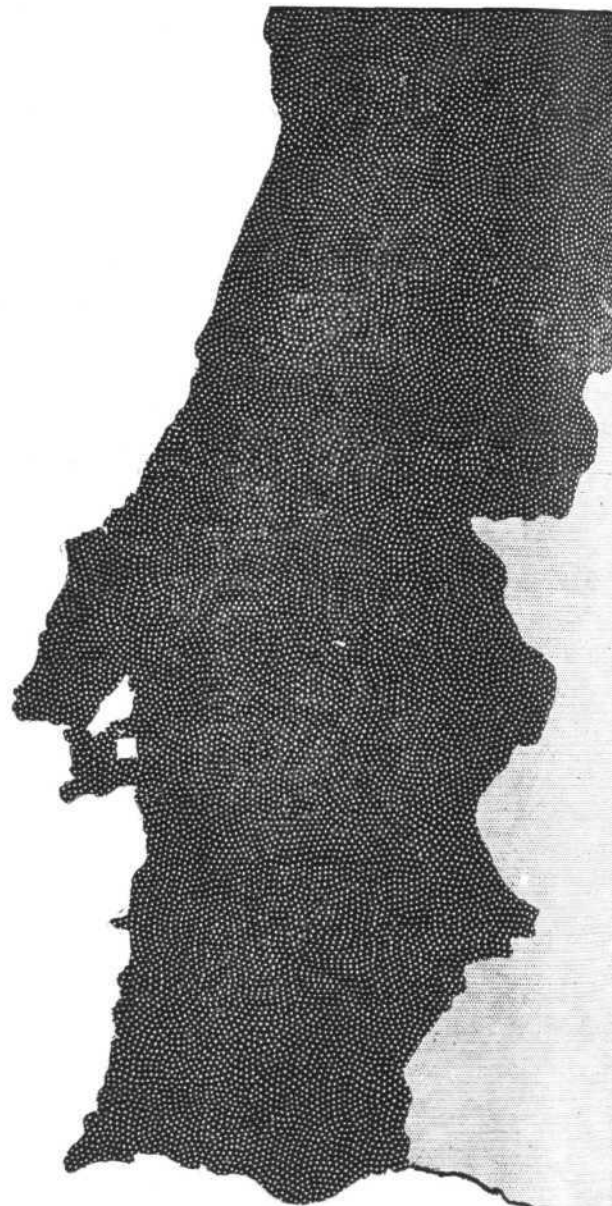
British Royal Air Force, Royal Australian Air Force, Royal Canadian Air Force, South African Air Force, Irish Free State Army Air Corps, New Zealand Ministry of Defence, United States of America Army and Navy, Chilean Military Air Force, Italian Royal Air Force, Danish Royal Air Force and Naval Air Service, Iugo-Slavian Naval Air Service.

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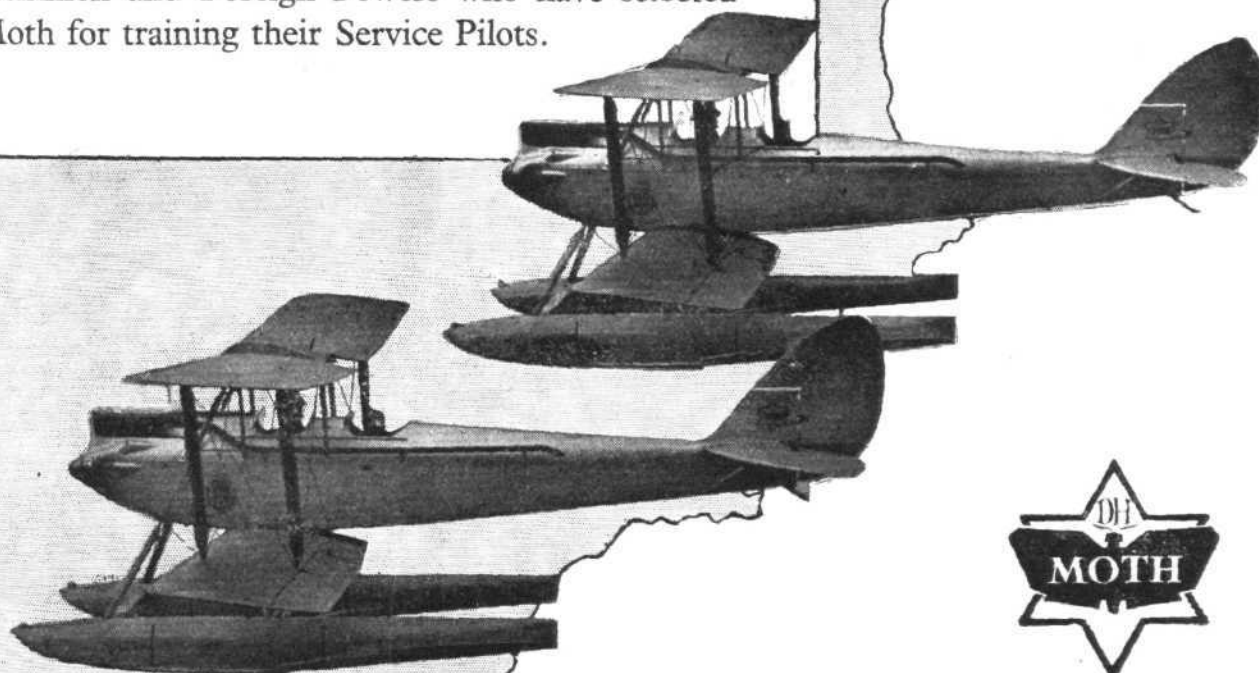
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FURTHER EVIDENCE OF MOTH ROBUSTNESS

A deputation of Portuguese Officials in examining the merits of various aircraft have finally chosen a complement of Gipsy Moth Seaplanes for the Portuguese Naval Air Force. These are to be used for training and instruction purposes in **aerobatics**.

Portugal's decision once again endorses the claims of Moth robustness and reliability, for aerobatics demand machines not only of unquestionably high performance, but also of structural strength to withstand abnormal stresses. Portugal's name is thus added to the long list of Dominion and Foreign Powers who have selected the Moth for training their Service Pilots.





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AIRISMS FROM THE



FOUR WINDS

Zenith Challenge Cup comes to England

It is reported from Paris that Capt. Broad, flying a Gipsy Moth, has won the Zenith Challenge Cup for light aircraft of under 400 kgs. weight. The circuit, which had to be flown in one day, was Orly-Lyons-Marseilles-Toulouse-Bordeaux-Tours-Orly, a distance of 1,037 miles. His speed was about 112 m.p.h. The previous holder was a German, Herr Roeden, flying an all-metal Junkers, who averaged 82.6 m.p.h.

Attacks on the Air Speed Record

ITALY is said to be making a strong effort to recapture the speed record and a special machine is being built for Major de Bernardi at the Macchi factory which is to have an Isotta Fraschini engine. M. Francois Poncet, at the opening of the La Baule meeting, also announced that France will make an attempt with the machines and engines which were to have been used in the Schneider Trophy race had they been ready.

New Air Services

An air service which will run three times weekly has been started between Brindisi and Venice with connections to Athens and Constantinople, and to Vienna and Berlin.

The Junkers Co. are stated to have started a bi-weekly service between Teheran and Baghdad. It is proposed to establish a system of air lines between Siam and Indo-China.

On September 22 a new air route is scheduled to start between Paris and Madrid.

A Happy Sequel to the Portuguese Naval Mission's Visit

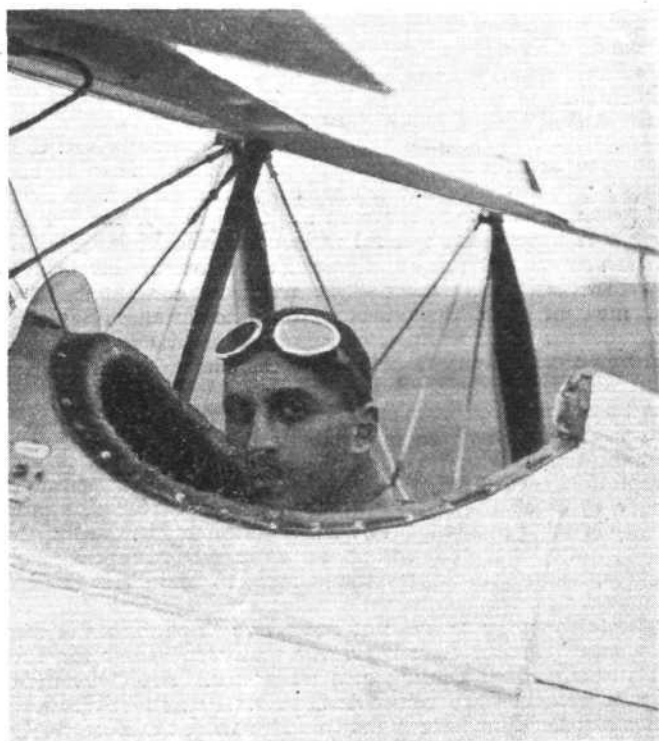
THE Portuguese Naval Section have just taken delivery of four Gipsy Moth seaplanes, to be used for the purpose of instructing their pilots in aerobatics. The characteristics of the Moth are such that a pupil may pass direct from it to a high-powered service aircraft.

National Flying Services' Imperial Activities

SQDN.-LDR. F. E. GUEST, with Flying Officer E. H. Fielden, Flying Officer E. J. Horden and Miss Spooner as his pilots, will be leaving England on October 5 for Nairobi. He proposes to open an office at Nairobi and inaugurate an air taxi service between the various centres of population, which will thus act as a feeder to the Cape-to-Cairo Imperial Airways route.

Canterbury should Wake Up

CANTERBURY has opposed the suggestion of National Flying Services, Ltd., that they should employ them (N.F.S.) as consultants and to select a site for a municipal aerodrome. The City Council considered that providing an aerodrome was a highly speculative proceeding, and the view was expressed that there was no real reason why cities should be



Mr. L. E. R. Bellairs, of the Southern Aero Club and Southern Aircraft Co., in the new single-seater biplane, the "Martlet," built by the company and fitted with an A.B.C. "Hornet" engine. It has remarkable manoeuvrability, lands in an extremely short distance, and shows exceptional steadiness on the ground.

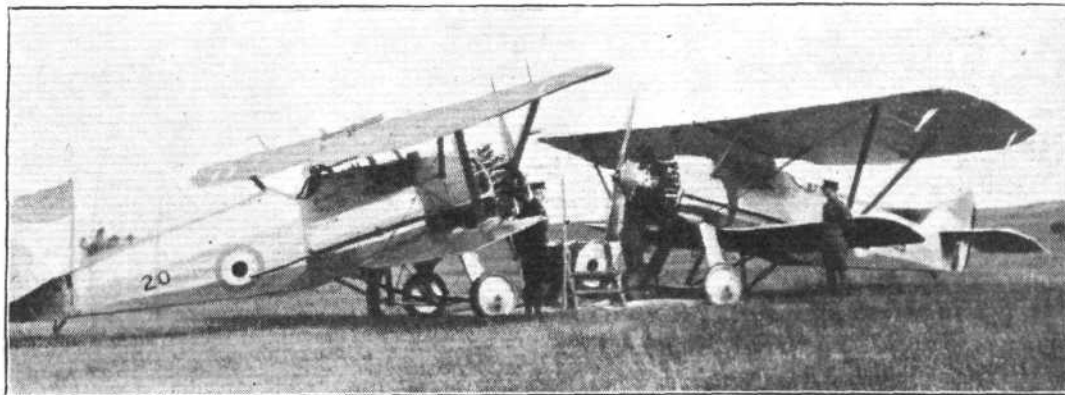
("FLIGHT" Photo.)

put to the expense of such an undertaking, as it was a commercial proposition. If N.F.S. were to institute the service they should provide the aerodrome themselves. Surely a very short-sighted view.

Opening of Hull Aerodrome

ARRANGEMENTS are now almost completed for the opening of the Hull Municipal Aerodrome on October 10. The opening, which will be performed by Prince George, coincides with the beginning of Civic Week, and a very fine programme for an air pageant has been arranged. A squadron

A Canadian Commemoration: To commemorate the tenth anniversary of the first transatlantic flight by Alcock and Brown, the Royal Canadian Air Force marked the occasion at the annual Inspection of the Military Units at Camp Borden, Ont., by christening two of the latest Armstrong-Whitworth Siskin IIIA machines (Armstrong-Siddeley supercharged "Jaguars"). They were christened, by



the Hon. Brig.-Gen. A. H. Bell, C.M.G., D.S.O., "Sir John Alcock" and "Sir Arthur Whitten Brown."

of R.A.F. Fighters will be the principal attraction. Many well-known civilian airmen have promised to attend. There is to be a race for light aeroplanes over a 30-mile course, and a special display is to be given by the N.F.S. formation. The National Flying Services are leasing the aerodrome from the Corporation. Prince George will arrive and depart by air, and amongst others who have accepted the City's invitation to be present is the Minister for Air, Lord Thomson. The Committee extend an invitation to all civilian flyers, who will be the guests of the Corporation. The Lord and Lady Mayoress are arranging a ball for the visitors in the evening. Any further information may be had from the Hon Secretary, Aerial Pageant, "Evening News," Hull.

Bolton Civic Week

BOLTON are having a civic week from September 20 to 29, during which the delights and work of the town will be shown to all visitors. Amongst other attractions there will be some flying, the details of which have not yet been published.

Concerning The "R 100" and "R.101"

IN view of the practical completion of the airship "R. 100" at Howden it is interesting to note that it has been constructed by the Airship Guarantee Co., of which Messrs. Vickers, Ltd., own the whole of the cash capital. In referring to this matter at the annual general meeting of the Vickers Co., in March last, the Chairman, General the Hon. Sir Herbert A. Lawrence, G.C.B., said:—"It may not be inopportune if I mention that the Vickers group of companies accept contracts for work of national importance of an experimental nature on which losses are incurred, as, for example, the giant airship R.100, now being constructed by the Airship Guarantee Co.—one of our subsidiary companies. This contract was accepted in 1924, and it has been necessary to provide a considerable sum to cover the estimated loss on completion, owing to the fact that the airship has taken much longer to erect than was originally anticipated. A similar airship is being constructed by the Air Ministry at Cardington, the whole cost of which falls on the taxpayer but Vickers, as private contractors, have to shoulder the loss themselves."

The latest news to hand of the above ships makes it seem reasonably certain that they will really be ready for their trials about the beginning of next month. After the necessary home trials are completed, the R.101, the State ship, will make her first long flight to India with the Secretary of State for Air on board. She will do so in preference to R.100, as she has heavy-oil engines, which will be safer than petrol-driven engines in the tropical heat. During the war, German Zeppelins went as far south as Victoria Nyanza,

but this is considered an unnecessary risk to run now. Shed trials of a very elaborate nature are now in progress, and the greatest care is being taken to test out and check everything while the ship is air-borne in the shed. All services such as the electrical system, fuel system and ballast system are most rigidly inspected under these conditions, and the engines are run up and the mountings carefully watched. Another series of tests which are very important is ascertaining the strength of the ship with any gas-bag deflated; for this purpose, every other bag was left deflated in R.101, and in R.100, one of the largest was left empty. Lift and trim test and total displacement test form the final tests, after which, the airships are ready for their first flights. Major G. H. Scott will be in command, with Sqdn.-Ldr. E. L. Johnston as his navigating officer for R.101, and it is understood that Sqdn.-Ldr. R. S. Booth and Capt. G. F. Meager have been detailed for R.100.

The Private Owners' Airship

THE Airship Development Co. have successfully flown their first light airship. The ship has a capacity of 60,000 cub. ft., and is driven by a 75-h.p. A.B.C. Hornet engine at 45-50 m.p.h. The A.D.I., as she is called, carries two people, and is intended for touring and training.

Brussels-London Night Air Mail

THE new night air mail line between Brussels and London will be formally opened on October 1 at 11 p.m. M. Jasper, the Prime Minister, M. Hymans, the Minister for Foreign Affairs, and M. Lippens, Minister of Railways, are expected to attend.

Aircraft's Many Uses

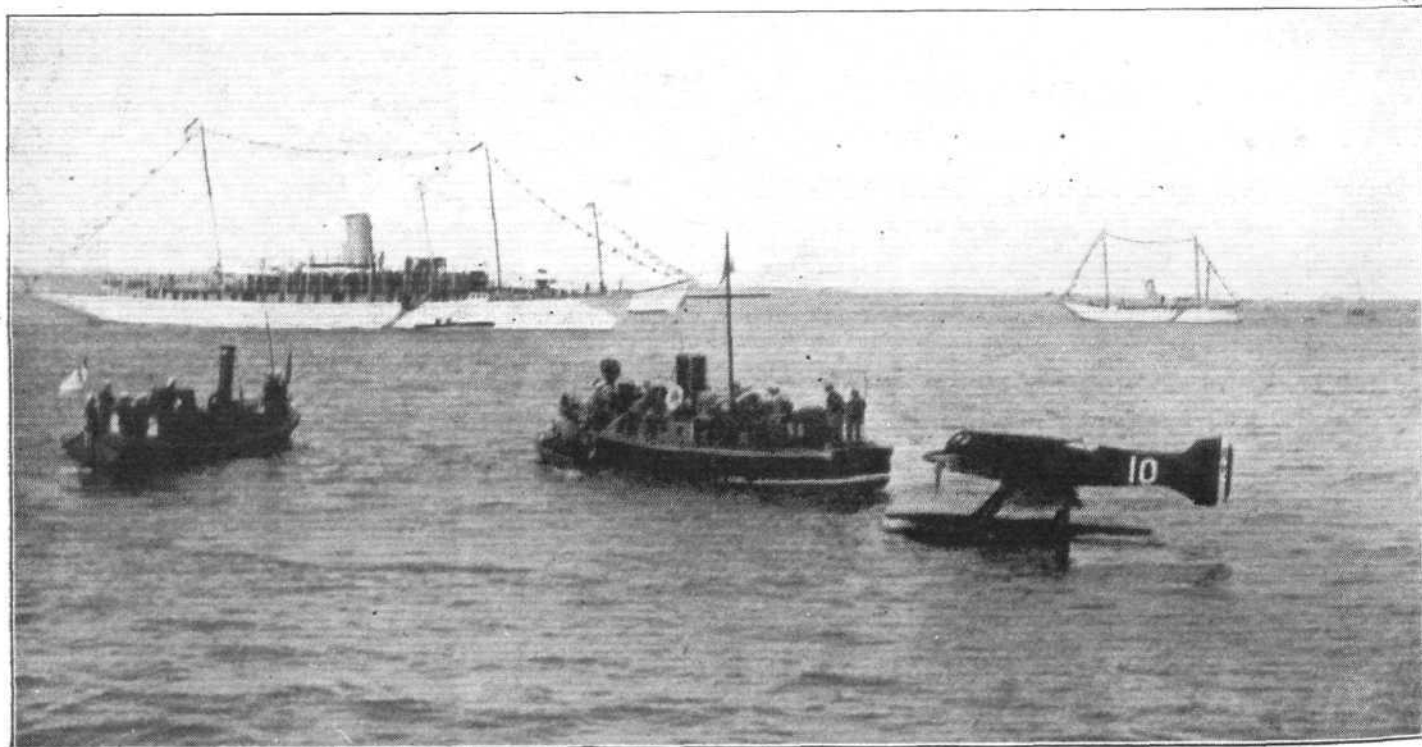
AMONGST the many and varied uses to which aircraft are being put may be mentioned: transport for the party leaders at the forthcoming Australian election, survey work during the recent floods in the Lower Sind district of India, and surveying a new copper mine in Northern Transvaal.

Aircraft Carrier Shuffling

WHEN the *Glorious* is ready as an aircraft carrier it is expected that she will go to the Mediterranean and that the *Courageous* will be transferred to the Atlantic Fleet to replace the *Argus*. The *Argus* will in turn be reconditioned for service in China to replace the *Hermes*.

British Air Lines, Ltd.

BRITISH AIR LINES, LTD., were last week reported as using Armstrong-Siddeley Four machines; this information, which was obtained from a usually reliable source, is found to be incorrect, and the machines are, in fact, Fokker machines obtained from the Deutscher Aero Lloyd. They are four passenger cabin machines of the F.3 type with a Puma engine. An Avian is also kept by the firm for single-passenger work.



A SCHNEIDER INCIDENT: Lieut. Monti, one of the Italian Schneider competitors, who was forced down off Hayling Island, was "salved" by a Royal Navy pinnace, and later handed over to the care of the R.A.F. launch. Our picture shows the latter taking the Macchi 67 in tow, while Lieut. Monti goes aboard and the steam pinnace, on the extreme left, proceeds on its way. (Photo by Mr. J. Stewart Mallin.)



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On Sept. 7th the Gipsy-Moth had flown for 563 hours on its Reliability Tour and the seals were still unbroken—equivalent to 47,865 miles.

After 500 hours flying the machine was put over a speed course and clocked only 1 m.p.h. less than the guaranteed all out speed of a brand new Moth.

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XXIX

India & Back Flight

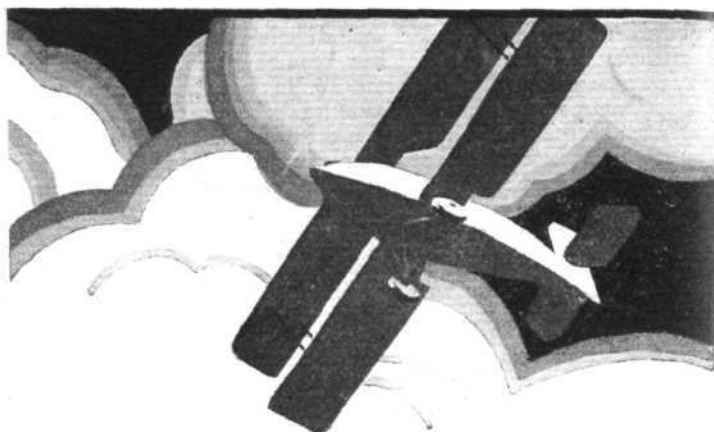
The spirit supplies for the Duchess of Bedford's remarkable flight to India and back were provided at all points on the route, with the exception of Karachi, by the British Petroleum Company, Limited.

The machine was a Fokker with Bristol Jupiter Engine, piloted by Capt. C. D. Barnard.

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N.F.S. flying rates include fuel and oil, insurance and free landing, housing and handling, at any N.F.S. station. The machines are two-seaters and members are able to carry a passenger at no extra charge. Single-seaters and three-seaters will also be available at a later date.

Hanworth, the London Air Park and Country Club, is now open as the best-equipped private flying centre in the country. In addition to flying activities that include instruction, private flying, and an air taxi service, Hanworth offers social facilities unequalled in the aviation world.

A limited number of members are now being enrolled at the following rates: Flying members, 5 gns. entrance fee, and 5 gns. annual subscription; Non-flying Members, 3 gns. in each case. For 1929, two-thirds of the annual subscription is rebated. Serving Officers of H.M. Regular Forces are admitted without entrance fee. Membership of the Hanworth Club confers honorary membership of all other N.F.S. Clubs. Residential terms at Hanworth range from 5½ to 7 guineas per week.

Write to-day for the N.F.S. brochure that fully describes the privileges of membership and enumerates the services offered to all who wish to fly.

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THE CHLORIDE AND EXIDE BATTERY WORKS

LAST week the Chloride Electrical Storage Co. invited a large number of press representatives to visit their works at Clifton Junction near Manchester when at a luncheon given at the Midland Hotel, Mr. D. P. Dunne, a director, dilated at some length on the number of inventions which are made anent accumulators and of the similarity of inventors' claims which are almost invariably those of greater capacity and less weight for the same bulk, higher efficiency, quicker charging, longer life, can be short-circuited without damage, does not sulphate and in addition some special constructional feature. He pointed out that his company spent large sums investigating inventions and on research work and most of these inventions came to them and were rejected. The only inventions which were incorporated by the Exide Co. were those which had undergone a long and trying process of modifying and refining.

periodical blood tests of everyone in order to ascertain that no trace of lead poisoning is present, the greatest care is taken to see that everyone washes their hands before having their meals or going home, baths are compulsory, and a dentist maintains their teeth in good condition, and facilities are provided for washing the mouth every day.

Other shops through which the party was conducted were the machine shop, where all the moulds are made and the machinery kept in repair; a shop where red lead oxide is filled into the tubes which form the plates of the Exide-Ironclad type of battery. Extra precautions are taken here against dust by keeping the floor wet and the compulsory use of respirators. At the end of each shift the men are allowed 20 mins. for baths and completely changing their clothes before going off. In the pasting shop the lead oxides are mixed into pastes and forced into the grid either by



THE CHLORIDE ELECTRICAL STORAGE WORKS, CLIFTON, MANCHESTER : The works cover 37 acres and employ 2,000 people.

They, the company, he said, were always on the look-out for some epoch-making invention but it had not yet materialised.

After luncheon the visitors were conducted round the works. Here they saw the plates for all classes of batteries being cast and trimmed and all other lead parts such as connecting strips made. The moulds are in some cases pressure moulds where the metal is forced in by compressed air while in others it is simply poured in. In this shop as in all the others, the greatest care is taken that no injurious dust or fumes shall be allowed to escape where it may be inhaled by the employees. Fans are arranged everywhere to exhaust such fumes and when necessary respirators have to be worn.

There is, probably, more care taken with the health of the employees than in any other trade. A resident doctor takes

machine or by hand according to the size of the plate. In the forming shop the plates are subjected to electrochemical action, which prepares them for use in the finished battery. The plate stores where the plates are finally trimmed up and stacked for ready use before being required in the pasting shop. Finally the assembly and packing shops were seen where the finished batteries are packed and despatched.

All kinds of accumulators are made by the Chloride Co. from huge submarine cells down to the policeman's hand lamp. In the aviation field their interest is mostly confined to wireless work, but starter batteries for electrical engine starters are now becoming more known. In wireless work besides the colossal output for the general public, they supply such concerns as Marconi's with the large storage cells for use on such occasions as the recent Schneider Trophy Broadcast, and also for aerodrome ground stations.

A Rolls-Royce Booklet

ROLLS-ROYCE aero engines have attracted particular interest lately through their appearance in many new types of military aircraft, such as the Hawker "Hornet" and Hawker "Hart" and Westland "Wizard." Those who attended the Heston Garden Party on July 20, were luckily treated to an impressive display of the Hawker "Hart" with Rolls-Royce engine by Flt.-Lt. Bulman. For speed and climb it is obviously in a class of its own.

"F" and "H" types are the latest productions of the Rolls-Royce Co. The former is supplied in no less than 12 varieties. The Fairey "Fox" high performance bomber has been fitted with the F.X.I.B. type. A new illustrated catalogue has just been published by the company which

gives details of these new engines with diagrams and other instructive illustrations.

Pilots for the Work Abroad

WE learn from the de Havilland Aircraft Co. that vacancies will occur shortly for two experienced pilots, who must have done some 500 to 600 hours' flying. Pilots with experience of flying low-wing monoplanes are preferred, as they will be required to fly Junkers and Gipsy-Moth machines. A good salary is offered, plus a weekly messing allowance. Applications, with full particulars of past experience, should be made to Mr. F. L. N. St. Barbe, of the de Havilland Aircraft Co., Ltd., Stag Lane Aerodrome, Edgware, Middlesex.

THE MODEL ENGINEER EXHIBITION

Some Notes on the Aircraft Section

THE Model Engineer Exhibition which was held at the Royal Horticultural Hall last week had a large amount of interest to the model aircraft enthusiast. The Society of Model Aeronautical Engineers had a stand and exhibited several machines which had gained awards at the recent Sir Charles Wakefield International Contest.

Both spar and fuselage machines were shown, and two in particular showed that these models are by no means toys. The first was a low-wing monoplane with a speed of 40 m.p.h., and the second was a small monoplane built entirely of balsa wood—that wood which is lighter than cork—which was driven by a 6-oz. rocket!

Another stand which had an extremely interesting collection was the Parliament Hill Model Aeroplane Club. This club—which, by the way, changed its name to the Model Aircraft Club—has progressed by leaps and bounds and has

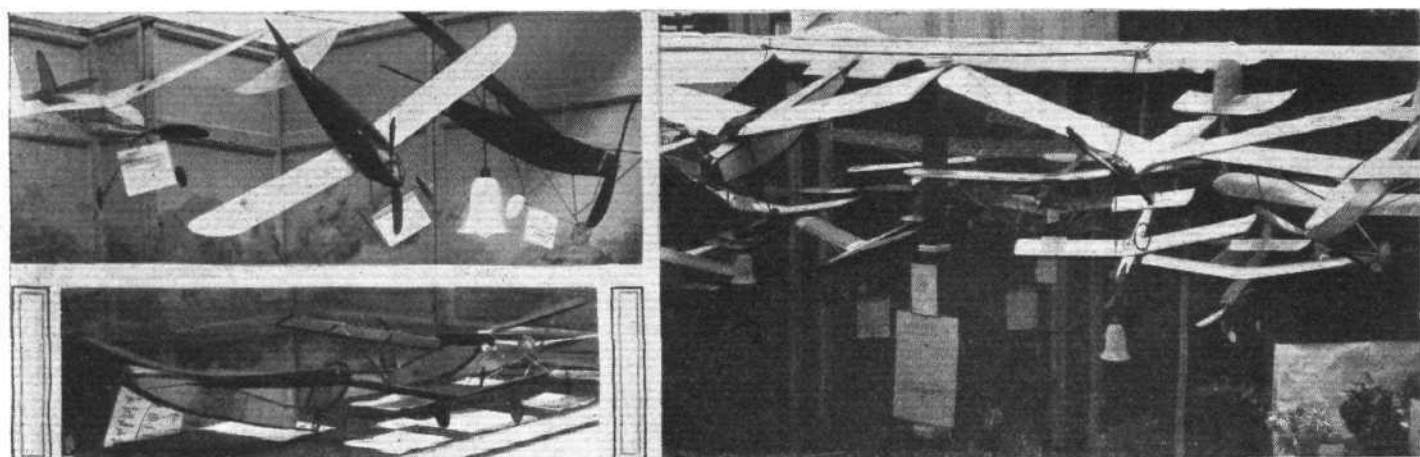
aeroplanes of the single-surface wing type made by Mr. F. Mee, and sold under the name of Warneford Models.

THE MODEL AIRCRAFT CLUB (Incorporating the Parliament Hill Model Aero Club)

Hon. Sec., A. E. Jones, Esq., 48, Narcissus Road, Hampstead, N.W. 6

The inauguration of the above club was effected at the Lecture Hall of the Junior Institution of Engineers on Thursday, September 12, with the very promising membership to date of 122.

Officers for the ensuing year were elected as follows:—
Chairman, K. P. Tweedie, Esq.; Hon. Sec., A. E. Jones;



SOME OF THE AERO EXHIBITS AT THE MODEL ENGINEER EXHIBITION: *Left, The S.M.A.E. Right, The P.H.M.A.C.*

now a membership of over a hundred who are in all parts of the country. Some particulars of this new club are appended.

Their exhibits were all fuselage machines and all built to fly. The ingenuity shown in the construction was really extraordinary; some were driven by rubber, others by compressed air, and in one case even by a petrol motor. This last is a large monoplane, and it is hoped to break the world's record for endurance with it. Another machine was shown in skeleton, and from it one could readily realise the immense amount of work which building such machines entails.

The Halton Model Aeroplane Club also had a number of machines on view on their stand showing the Halton apprentices' work. Many of these machines were seen at the Model Aeroplane meeting held at Heston Aerodrome on the day of the garden party during the recent Aero Show.

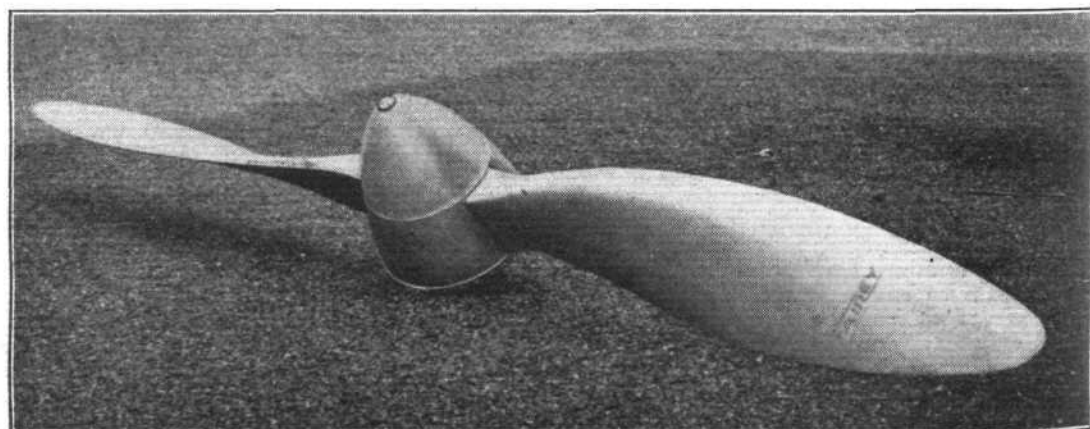
Gamages, Ltd., amongst many other models calculated to attract all boys, were showing a range of flying model

Assistant Sec., M. Knight; Financial Sec., M. Gibson; Technical Adviser, D. A. Pavely; Competition Sec., T. Newell; Publicity Officers: R. J. Trevithick, A.I.P.A. and J. J. Holt, A.M.; Entertainment Sec., H. H. Dowsett; Chief Flying Instructor, C. J. Burchell; Assistant Flying Instructor, H. J. Davis.

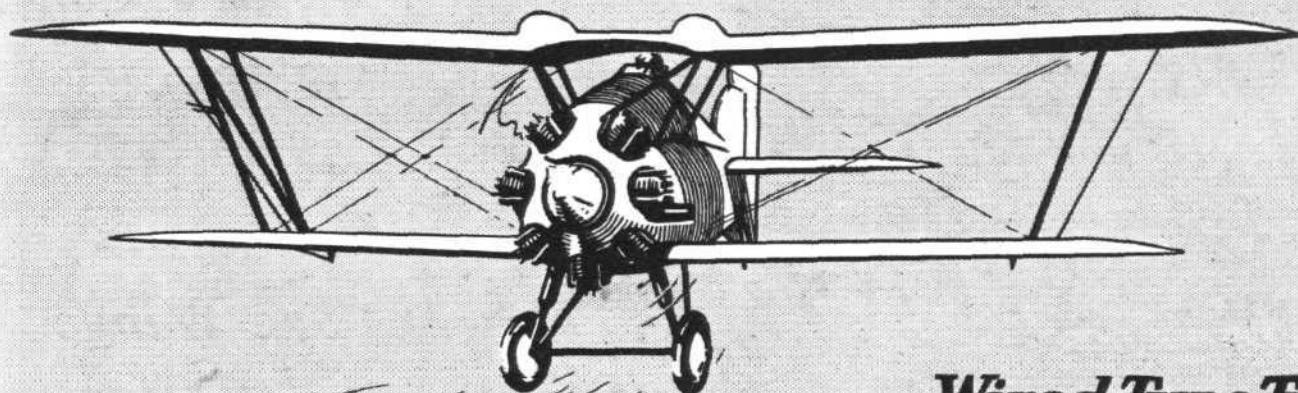
Council: Hamilton Lister, W. R. Burnett, A. T. Willis, R. Pavely, D. A. Russell.

A display of the club's aircraft will be given on Epsom Downs on Sunday, September 22, at the Grand Stand, Epsom Race Course, at 2 p.m. A motor coach has been chartered to convey the party and friends, full particulars from the Hon. Sec. or H. H. Dowsett, 80, Gresham Road, Brixton, S.W. 9. This event will unquestionably be the finest display by aero-modelists ever held in this country. Petrol and compressed air driven aircraft will be outstanding attractions, in addition to a large number of fuselage biplanes and monoplanes.

The Schneider Winner's Good Fairey: The Fairey metal airscrew fitted to the Supermarine Rolls-Royce S.6 on which Flying Officer Waghorn won the Schneider Trophy Contest at 328.63 m.p.h.

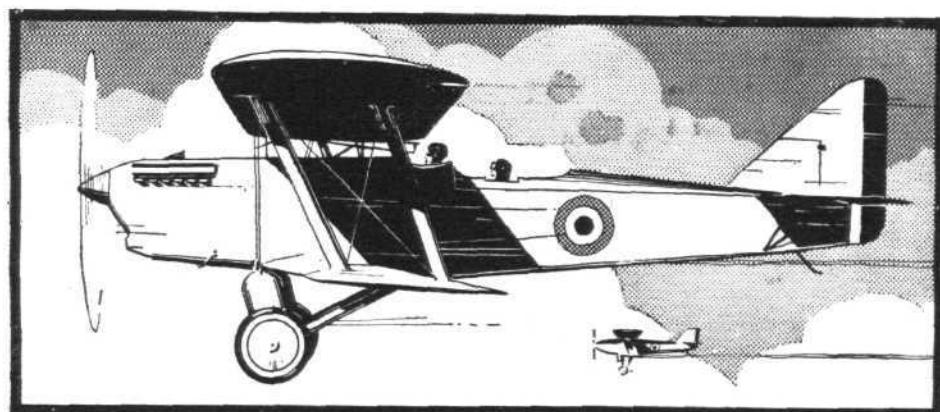


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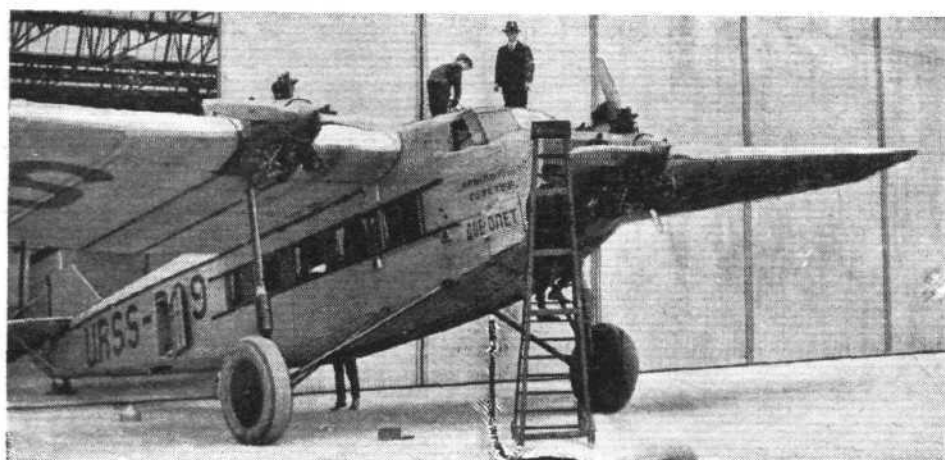
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THE ROYAL AIR FORCE

London Gazette, September 10, 1929
General Duties Branch

The follg. are granted short service commns. as Pilot Officers on probation with effect from and with seniority of Aug. 30:—K. M. Cass, H. R. Clay, L. A. Cubitt, G. G. Dixon, G. D. W. Frayling, D. W. H. Heath, R. J. B. Hitchin-Kemp, H. de M. Middleton, R. J. Parkhouse, A. C. Richardson, J. B. Tatnall, H. Travis. Lieut. J. B. Heath, R.N., is re-attached to the R.A.F. as a Flying Officer, with effect from Aug. 20 and with seniority of June 16, 1924.

The follg. are granted permanent commns. in the ranks stated:—Flight-Lieut. R. Y. Eccles (May 1); Flight-Lieut. F. Boston (Sept. 1); Flying Officers H. R. Bardon, C. A. Bell, H. A. Evans-Evans, T. P. P. F. Fagan, J. D. Greaves, J. A. Hawkings, W. T. Holmes, L. T. Pankhurst, T. H. Perry-Reene, P. C. Rowland, A. C. H. Sharp (Sept. 1).

The follg. are promoted with effect from Sept. 11:—Flight-Lieutenants to be Squadron-Leaders.—L. G. Le B. Croke, P. Warburton, M.B.E., R. P. M. Whitham, M.C. Flying Officers to be Flight-Lieutenants.—R. W. E. Bryant, J. J. Nolan, M. D. Ommanney, C. F. Steventon, C. R. Hancock, C. H. Tighe, F. W. Moxham.

The follg. Pilot Officers are promoted to rank of Flying Officer:—K. F. T. Pickles (June 17); P. G. J. Atkinson (July 9); A. C. Pearson (July 9).

Sqdn.-Ldr. P. C. Sherren, M.C., is placed on half pay list, Scale B, Sept. 3 to Nov. 2, 1929, inclusive. Flying Officer E. J. Wright is placed on retired list on account of ill-health (Sept. 7); Flying Officer, E. G. Olson is transferred to Reserve Class C (Sept. 4). The short service commns. of the

follg. Pilot Officers on probation are terminated on cessation of duty:—P. F. Corbett (Sept. 7); J. E. Ashworth (Sept. 11); A. A. McLaren (Sept. 11). Flying Officer V. S. Bazalgette (Lieut., King's Own Royal Regiment) relinquishes his temp. commn. on return to Army duty (Sept. 1).

Chaplain's Branch

The Rev. A. H. Dolphin, A.K.C., relinquishes his short service commn. on completion of service (Sept. 6).

Memorandum

The permission granted to Lieut. R. W. Griffiths to retain his rank, which was withdrawn on his enlistment in Territorial Army, is restored (May 4).

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

The follg. Pilot Officer to be Flying Officer (Jan. 26):—Reserve are confirmed in rank (March 18) N. A. Lindley, A. A. Worth.

Flying Officer V. P. Field relinquishes his commn. on completion of service (Sept. 7); Pilot Officer on probation F. E. S. Groves relinquishes his commn. in Special Reserve on account of ill-health (Sept. 4). The commns. of the follg. Pilot Officers on probation are terminated on cessation of duty:—D. S. Clarke (Aug. 10); R. A. Robbins (Aug. 23).

AUXILIARY AIR FORCE

General Duties Branch

No. 601 (COUNTY OF LONDON) (BOMBER) SQUADRON.—The follg. Pilot Officer to be Flying Officer (Jan. 26):—T. J. R. Cornwall-Walker.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Wing Commander P. Babington, M.C., A.F.C., to H.Q., R.A.F., Middle East for Personnel Staff duties, 30.8.29.

Flight-Lieutenants: J. Cottle, M.B.E., D.F.C., to No. 2 Armoured Car Company, Palestine, 3.9.29. A. R. Jones, A. E. Lindon, M.B.E., both to H.Q., R.A.F., Middle East, 3.9.29. W. J. Millen, to No. 26 Squadron, Catterick, 2.9.29. E. B. Grenfell, A.F.C., to No. 99 Squadron, Upper Heyford, 12.9.29. C. D. Pyne, to No. 33 Squadron, Netheravon, 16.9.29. H. Thomas, to No. 1 Flying Training School, Netheravon, 11.9.29. H. G. Kirkman, to School of Photography, South Farnborough, 25.8.29. R. L. Ragg, A.F.C., G. H. Smith, both to R.A.F. Base, Calshot, 24.9.29.

Flying Officers: H. A. Evans-Evans, to H.Q., R.A.F., Middle East, 3.9.29. H. H. Brookes, to No. 2 Armoured Car Company, Palestine, 3.9.29. N. K. Howard, to R.A.F. Depot, Uxbridge, 10.8.29. M. H. Clare, to No. 404 Flight, Mediterranean, 30.7.29. N. B. Morris, to No. 2 Armoured Car Company, Palestine, 3.9.29. M. Lowe, to No. 4 Flying Training Sch., Middle East, 31.8.29. T. F. Molony, to Electrical and Wireless Sch., Cranwell, 9.9.29. E. G. C. Stokes, to Electrical and Wireless Schl., Cranwell, 9.9.29. E. V. S. Lacey, to Station H.Q., Kenley, 12.8.29. C. R. Mason, to Night Flying Flight, Biggin Hill, 12.8.29. R. G. Hart, M.C., to Sch. of Photography, South Farnborough, 14.9.29. W. M. C. Kennedy, to Central Flying Sch., Wittering,

12.9.29. J. F. Moir, to No. 2 Flying Training Sch., Digby, 24.8.29. J. Clarke, to Royal Air Force College, Cranwell, 4.9.29. S. R. Groom, to Andover Communication Flight, 17.8.29. J. H. Woodin, to R.A.F. Base, Calshot, 22.9.29. P. G. Lucas, to R.A.F. Depot, Uxbridge, 1.9.29.

Pilot Officers: F. L. P. Hensell, to No. 8 Squadron, Aden, 30.8.29. R. Chadwick, to R.A.F. Base, Calshot, 24.9.29.

The undermentioned pilot officers are posted to the R.A.F. Depot, Uxbridge on appointment to Short Service Commns. on probation, with effect from 30.8.29:—

K. M. Cass, G. G. Dixon, J. B. Hitchin-Kemp, A. C. Richardson, H. R. Clay, G. D. W. Frayling, H. de M. Middleton, J. B. Tatnall, L. A. Cubitt, D. W. H. Heath, R. J. Parkhouse, H. Travis.

Stores Branch

Flight Lieutenants: E. W. Lawrence, to No. 47 Squadron, Middle East, 21.8.29. E. R. Wood, to No. 4 Stores Depot, Ruislip, 10.9.29.

Flying Officer: J. E. Reynolds, to No. 35 Squadron, Bircham Newton, 27.8.29.

Accountant Branch

Squadron Leader: J. S. Griffiths, to R.A.F. Training Base, Leuchars, 9.9.29.

Flight Lieutenant: E. C. MacK. Knott, to H.Q., Inland Area, Stanmore, 16.9.29.

Flying Officer: R. J. Wishlade, to No. 111 Squadron, Hornchurch, 2.9.29.

AIR MINISTRY NOTICE TO AIRMEN

Orfordness Rotating Radio Beacon

1. An experimental rotating radio beacon has been installed at Orfordness, Suffolk (Lat. 52°04'59" N., Long. 1°34'10" E.), and is being operated at regular hours.

2. A brief description of the beacon, the method of working, details of signals emitted and the matter in which it may be utilised as an aid to navigation, are given in Air Ministry Pamphlet No. 38, entitled "Orfordness Rotating Wireless Beacon. Instructions for taking Bearings."

3. This pamphlet may be purchased at the price of 3d. net, postage 1d. extra, from H.M. Stationery Office at the following addresses:—

Adastral House, Kingsway, London, W.C.2, etc., or through any bookseller.

4. In order to test the general utility of this system of direction finding, the co-operation of all pilots and radio operators is invited. Every opportunity should be taken of ascertaining the bearing of aircraft by means of this beacon, especially when they are in known positions, or when the radio bearings can be checked by visual or other means.

The results should be recorded and sent to the Secretary, Air Ministry (Signals) preferably in the form shown in Appendix III of the pamphlet.

5. The A.M. Pamphlet is amplified as follows:—

1. Owing to the experimental nature of the beacon and the limited accuracy of stop-watches, there may be times when a complete rotation of the beacon is not exactly in agreement with one minute of the clock or watch used. The discrepancy, if any, will generally be very small, but it may accumulate over the four-minute period of the navigation signals. In the event of there being a noticeable difference, the observer should note the extent of the discrepancy on each repetition of the North (or East) signals and make allowance accordingly.

2. The stop watch used by the observer should be checked periodically with a standard clock, as apparent discrepancies in the speed of rotation may be due to a faulty stop watch.

(No. 56 of 1929.)

PERSONALS

Married

FLIGHT-LIEUTENANT E. C. BARLOW, R.A.F., was married on September 10, at Bromley, to BARBARA, daughter of BRIG.-GENERAL C. B. NORTON, C.M.G. D.S.O., and Mrs. Norton, Windsor.

The marriage of Mr. W. E. GREEN, D.F.C., of St. Ives, Huntingdonshire, and CICELY, daughter of Mr. and Mrs. FRANCIS BERRY, of 73, Wimbledon Hill, S.W. 19, took place at the Parish Church of St. Mary, Wimbledon, on September 14.

To be Married

The engagement is announced between FLIGHT-LIEUT. GEORGE R. M. CLIFFORD, R.A.F., elder son of the Rev. R. F. M. and Mrs. Clifford, Chillenden, Kent, and Miss DOROTHY GORDON BLACK, youngest daughter of Mrs. Black, of Chapel, Kingskettle.

LA BAULE MEETING

(Concluded from page 1033.)

held on Sunday, the second day of the meeting. It took place over a triangular course around La Baule Bay, consisting of about 33 kms., which had to be flown over three times. All five of the 'planes that had competed in the "Rallye" took part.

The race was won by Tanguy on his Schreck-Hispano in 55 minutes flying time, he being the limit man. Paumier finished second, having taken 45 minutes. Ponce, on the Air Union naval plane, was third, in 43 minutes; and the Baron de Precourt finished fourth, having taken 51 minutes to

traverse the course. The handicaps were awarded after trials earlier in the afternoon. Motor trouble forced Challe to abandon the race before the finish.

The winner of the handicap speed race received 30,000 francs in cash as a prize and the Aero Club of France Cup. The pilot of the second 'plane received 15,000 francs, and the third 5,000 francs cash.

As there were no entries for the speed race for 'planes capable of making 400 km./hrs., it was consequently not run.

The Altitude contest for the Georges Dreyfus prize of 25,000 francs did not take place. Challe, the only entry, was obliged to forego his attempt owing to motor trouble.

CORRESPONDENCE

[The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.]

RAILWAY'S ROAD TO PROSPERITY

[2208] Mr. Edge's letter in FLIGHT for Aug. 22, pointing out the possibility of using railway station areas for overhead aerodromes, is thoroughly in agreement with our views, and we join in thinking that the railways have in this respect a potential gold mine.

Unfortunately, the railway company possessing the London station which we consider best suited for this purpose, do not appear, as will be seen from the enclosed correspondence which has passed between us, to have yet realised the importance of this possibility, and it will certainly be regrettable if the railways make the mistake of not realising the potentiality of air transport until it is too late for them to take a powerful interest in it, as occurred in the case of road transport.

NORMAN E. NORTH & PARTNERS.

86, Strand, W.C.2., August 27, 1929.

(Enclosures.)

July 9, 1929

The Secretary, — Railway.

DEAR SIR,—We have been discussing with the Air Ministry the question of an overhead landing stage for the arrival and departure of aeroplanes into London, in order to obviate the usual journey to Croydon or the suburbs, which generally takes approximately as long as the average journey from these stations.

Hitherto such a proposal has been somewhat impossible in view of the type of construction available, but we are happy to inform you that as a result of recent progress one of our clients is now manufacturing a special open type of steel flooring utilising steel on edge, and since same can be built continuous this removes the principal objections which have hitherto prevailed in a proposition of this kind.

As the construction of this stage over — Station has been suggested as being the most suitable and desirable we should be glad to know to what extent your company would approve and support such a proposal.

It would help us with our negotiations, therefore, if you would advise us whether, in the event of a successful design being submitted:

1. Your company would approve of a structure.
2. To what extent your company would be prepared to finance the proposition.

A rough estimate of the income likely to accrue indicates that a 5 per cent. return could be obtained from a capital of over £4,000,000.

On the other hand, we believe that a suitable structure could be carried out without seriously affecting the lighting and other conditions prevailing at — for a cost of little over a quarter of this sum.

Yours faithfully, for
NORMAN E. NORTH & PARTNERS.

Secretary's Office, — Station, London.

July 10, 1929

DEAR SIR,—I am in receipt of your letter of yesterday's date and beg to say that it will have consideration.

Yours faithfully,
—, Secretary.

Messrs. Norman E. North & Partners.

General Manager's Office, — Station, London.
July 11, 1929.

DEAR SIR,—I have received and thank you for your letter of the 9th inst., but this company is not prepared at present to consider favourably the construction of a landing stage for aeroplanes over — station.

Yours faithfully,

Messrs. Norman E. North & Partners.

✻ ✻ ✻ ✻

A Hadleigh Echo

In our report of the Hadleigh meeting, in our issue of September 6, we inadvertently gave the kudos for Mr. Murray's display of aerobatics to the London Club. We now stand corrected, as we are informed that Mr. Murray was a pupil of Capt. E. A. Jones, of the Brooklands School of Flying. This school is also responsible for the flying of Mr. R. Quilter, who was a pupil of Capt. H. D. Davies.

PUBLICATIONS RECEIVED

Motor Log Book and Lubrication Guide. The Anglo-American Oil Co., Ltd., 36, Queen Anne's Gate, London, S.W.1.

The Kyokuto Motor. Vol. 4, No. 8. The Kyokuto Motor-sha, Osaka, Japan.

Abstracts of Scientific and Technical Publications from the Massachusetts Institute of Technology. No. 4. July, 1929. Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.

The Schneider Trophy Contest, September 6 and 7, 1929. The Royal Aero Club Official Souvenir Programme. Gale and Polden, Ltd., 2, Amen Corner, London, E.C.4. Price 1s.

Aeronautical Research Committee Report for the Year 1928-29. H.M. Stationery Office, Kingsway, London, W.C.2. Price 2s. net.

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IMPORTS AND EXPORTS

AEROPLANES, airships, balloons and parts thereof (not shown separately before 1910.)

For 1910 and 1911 figures see FLIGHT for January 25, 1912.

For 1912 and 1913, see FLIGHT for January 17, 1914.

For 1914, see FLIGHT for January 15, 1915, and so on yearly, the figures for 1927 being given in FLIGHT, January 19, 1928.

	Imports.		Exports.		Re-exports.	
	1928.	1929.	1928.	1929.	1928.	1929.
Jan.	£ 1,220	2,852	£ 157,598	74,307	£ 330	100
Feb.	1,772	6,532	118,622	195,369	345	2
March	4,805	1,210	125,901	204,664	1,307	902
April	2,904	5,816	134,126	186,477	3	115
May	2,513	4,706	118,804	243,549	640	1,243
June	5,916	9,304	86,245	144,817	1,317	750
July	2,025	6,961	108,746	139,695	521	—
August	2,566	16,706	97,303	160,625	100	4
	23,721	54,087	947,345	1,349,503	4,563	2,306

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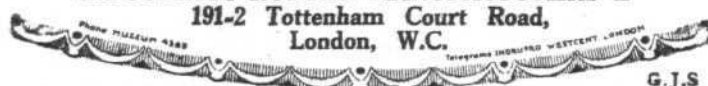
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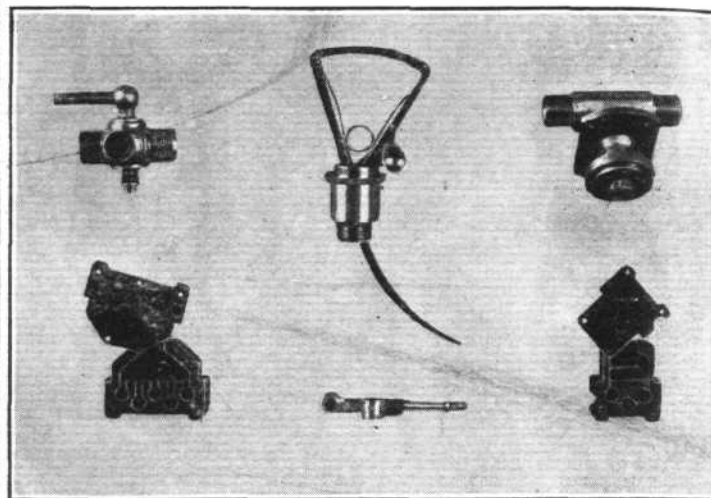
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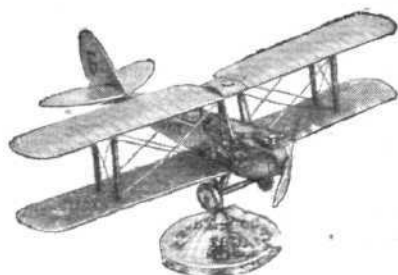
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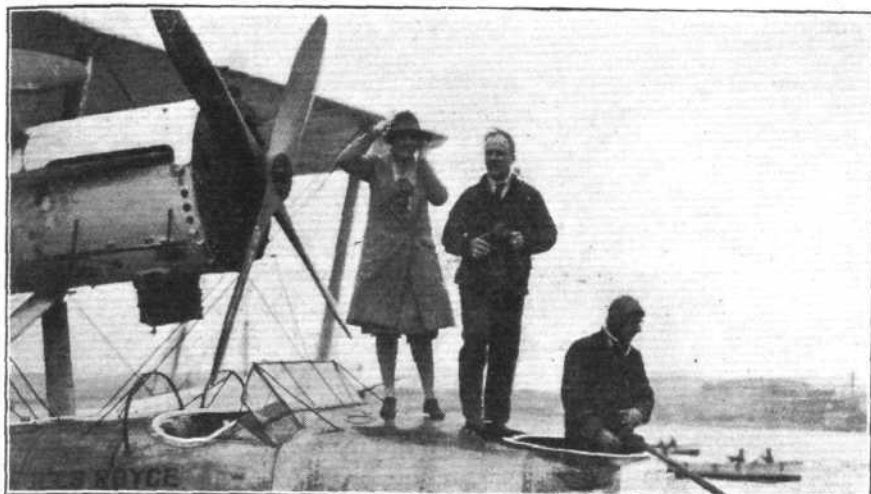
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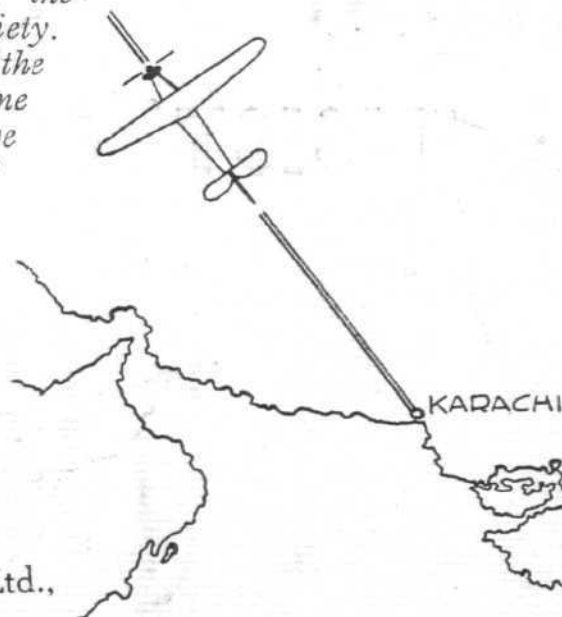


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